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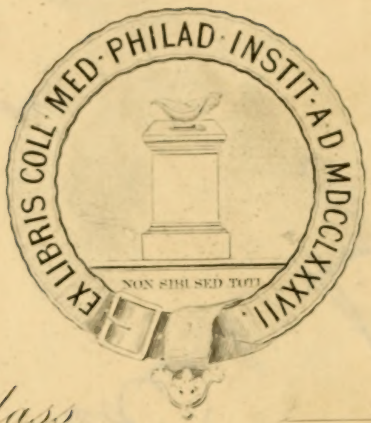

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Original Articles.

A SYNOPSIS OF THE VARIOUS POINTS OF INTEREST IN POST-MORTEM EXAMINATIONS.

BY CHARLES H. MERZ, A. M., M. D.

The writer offers this brief synopsis in the hope that it may be of some value to the busy practitioner. The subject is one of importance, and the writer has attempted to show briefly the way in which all post-mortem examinations for medico-legal purposes should be conducted.

When death is occasioned by any other means than disease, where it occurs from some accident that immediately causes dissolution, or where it occurs by the hand of another, the death is unnatural. In any such case the greatest care and a full and intimate acquaintance with the methods of investigation are necessary to subserve the ends of justice. Too frequently these cases are investigated in an unmethodical manner —a fact no doubt due to the absence of any definitely outlined plan of procedure.

A regular method for medico-legal examinations is imperatively demanded, and it is trusted that the following suggestions may fulfill the indications and assist in enabling the practitioner to reach a trustworthy conclusion.

I

Time.—Autopsies should not be held until twenty-four hours after death, and then if possible in day-time, and in such a place as is supplied with the proper conveniences to insure thoroughness and care. Mere inspection can be made at any time.

Instruments should be sharp and in good condition, that the tissues may not be torn. Usually it will be found of advantage to have several sharp scalpels, a cartilage-knife, a razor, a couple of pairs of scissors, sharp and blunt hooks, a blow-pipe, saw, mallet and chisel, bone-forceps, curved needles, a pair of scales, and a six-ounce measure. In addition a magnifying glass for coarse examination will be required.

Putrefaction.—The presence of putrefaction need not be considered a sufficient reason for omitting an examination. Even when this has occurred, it is possible to detect macroscopic changes, injuries of the bones, foreign bodies, pregnancy, injuries, etc., etc.

Rigidity.—Before the examination is commenced, make a careful note as to the time when the patient died; the interval between time of death and examination; the temperature; the degree of rigidity. Examine all the muscles.

II.

External Examination. — The following points should be carefully ascertained and noted where possible: Name, age, and sex (for future reference); height from vertex to sole of foot; conformation of the body; nutrition; any evidence of disease. It is well to take the circumference of the skull at the occipital and frontal protuberances, and the circumference at the shoulders. Note any cicatrices, tattoo marks, absence of a limb, ecchymoses, tumors (their size, figure, location, and probable cause).

Signs of Putrefaction.—Blackness of the nails; fetid smell; swelling of the body; lividity and blackness of the skin; the cuticle separated from the true skin. Heat with humidity hastens putrefaction; dry heat does not. In water it does not advance as rapidly as in air. The length of time elapsed since death as determined by inspection is seldom precise, as it depends, in addition to the causes mentioned, on the age, constitution, last sickness, mode of death, depth of burial, etc. Observe the color and quantity of the hair and color of the eyes, tension of the eyeball, appearance of the cornea, relative size of the pupils.

Wounds.—By the term wound is understood

a form of bodily injury caused by external violence, and involving a breach of continuity in the soft parts. Such a lesion should be inspected carefully, and a description given of its exact position, shape, and direction—this with reference to some fixed point. Avoid any probing during the external examination. Notice the condition of the borders of the wound and surrounding parts. Decide if the wounds or injuries could have been inflicted in attempts at rescue, etc., and whether *ante-* or *post*-mortem—this latter point is best determined by signs of inflammation. Note should be made of blood or any other fluid escaping from any wound or natural aperture—its color and consistence; also the state of the teeth, and the appearance and position of the tongue.

Condition of the Body.—Well nourished or emaciated; bloating; color of the various parts. Parts red or otherwise discolored should be firmly pressed with the fingers, and then examined to see if the color remains or not. Incise colored patches, and note color of tissues and condition of small vessels. Examine the head, neck, chest, abdomen, back, anus, external organs of generation, and lastly the limbs. Look carefully for the presence of foreign bodies. In the child, note whether the anus is perforated or not, the condition of the umbilicus and umbilical cord, the presence or absence of *vernix caseosa*, and the condition of the various epiphyses.

III.

Internal Examination.—Here there should be a definite mode of procedure. The three main cavities should be opened and examined in order: the head, thorax, and abdomen. If there be any definite suspicion as to the cause of death, the cavity is to be first opened in which the principal changes are supposed to exist. Let it always be a rule, however, that all the cavities are to be examined. The first duty in every case is to determine the position of every organ in its particular cavity; the color and condition of its surface, and the presence or absence of any unnatural contents—gases, coagula, and fluids; the quantity of the latter should be accurately determined.

Cavity of the Cranium.—To be opened in the usual manner—familiar to every one—unless this interfere with some wound. Note the condition of the soft parts, and surfaces of the bone. Saw the bone in a circular manner, and remove the skull-cap with care. In persons that have suffered from chronic alcoholism, this will be difficult, owing to adhesions; and in children this is also true. Examine the external surface of the dura mater and the condition of the pia mater. Remove the brain with care, and examine the base of the skull and the large arteries. Note the presence or absence of fluids, and determine the quantity if present. Look for foreign bodies and coagula. Note the size, weight, and shape of the brain, the fullness and color of the vessels. The consistence and structure of the brain substance is to be determined by broad incisions. If necessary, attach a metal label to each slice, and preserve for a more minute examination.

Neck, Thorax, and Abdomen.—It is better to make one incision from the chin to the pubes, passing to the left of the umbilicus. The presence or absence of gas and fluids in the abdomen must be determined. In every case, make note of the position, color, and appearance of the abdominal viscera *in situ*. The position of the diaphragm must be determined by the hand.—Now open the thorax in the usual manner. Ascertain the condition of the pleural cavities—the character and quantity of abnormal contents; condition of mediastinum, thymus, and larger vessels. Open the pericardium. Note the size of the heart, fullness of the coronary vessels and other cavities, and the color and consistence of the heart muscle before any incision is made. The various cavities of the heart must be opened separately whilst the organ remains in its relative position to the surrounding organs. Open each auricle and ventricle separately, and determine the contents; quantity; coagulated or not. Examine all the larger vessels, and test all the valves.

Lungs.—Remove, but, if adherent, remove the costal pleura with them. Examine the outer surface for exudation, color, minute hæmorrhages, fibrous nodules, excessive pigmentation, emphysematous bullæ, consolidated patches, etc. Note the capacity for air. On incision into substance, note the amount of blood and how much may be

squeezed out; color of serum and scrapings. Look for new growths, foreign bodies, and any obstructive mass.

Where the larynx or trachea has been injured, or important changes are supposed to exist, remove and open posteriorly. If death from strangulation or suffocation is suspected, the carotids are to be opened to see if lining membrane is injured. Note the condition of the cervical vertebræ and deeper cervical muscles.

Abdominal Cavity.—Take out the omentum and look for abnormal growths and appearances. Note the size of the spleen *in situ*. Remove, weigh, and incise over convex border. Note color, and quantity of blood. Test with solution of iodine.

Kidneys.—Remove and examine each one separately. Weigh them and examine outer surface. Incise over convex border. Note amount of blood, color of cortex and medulla. Strip off capsule—see if adherent. The relative position of medulla and cortex is to be observed; the size, patency, and thickness of the walls of the arteries; regularity and size of the Malpighian bodies; the interlobulary vessels, cortex and straight vessels of the pyramids. Look for cysts, and note condition of the mucous membrane of the calyces, pelvis, and ureter. Stain with a solution of iodine. Describe the size, color, and consistence of the supra-renal capsules.

In females dying after delivery, observe the condition of the veins and lymphatics of the inner surface and walls of the uterus, and the size and contents of the vessels.

Stomach.—May be examined at the same time as the duodenum. Note condition of the mucous membrane; congestion; thickening of the pylorus; ulceration. Remove contents and preserve for a future examination.

Liver.—Observe the external appearance. Make a long incision and note the condition of the parenchyma. Weigh. Note toughness of tissue; friability; amount of blood; size of vessels; appearance of capsule; amount of connective tissue; color and appearance of each zone of the lobules, before and after addition of iodine solution. Look for new growths.

Pancreas.—Take out semilunar ganglia. Weigh and note dimensions.

Intestines and Mesentery.—To be examined *in situ*. Search for enlarged glands, adhesions, new growths. Separate mesentery from intestines. Wash well. Examine the bowels as to contents, mucous-membrane thickening, changes, congestion, ulceration, perforations, sloughing, etc. Carefully examine the vermiform appendix, and look for tubercle.

In certain cases the various other structures have to be examined and particular attention paid to certain parts, but the necessity for doing this will be indicated by the history of the case.

The utmost care and exactness should be exercised in pursuing these different examinations, and at the conclusion the physician must endeavor to give a clear, definite opinion as to the cause of death, avoiding all terms unintelligible to non-medical parties. If the cause of death is not discovered, it should be so stated, it being insufficient to state that death has occurred from internal causes or from disease.

IV.

In considering the different means by which homicide may be committed, it is perhaps sufficient for our purpose in this connection to consider the principal ones, namely, poisons, wounds, bruises, drowning, and strangulation. The first two are usually discoverable by the marks they leave on and in the body.

A few memoranda upon the more common poisons may be appropriately given in this connection.

Poisons are (1) irritant; (2) narcotic; (3) unclassified. The irritants produce vomiting and purging, intense abdominal pain, and fatal exhaustion. The narcotics produce fullness of the head, vertigo, dimness of vision, delirium coma, paralysis, and sometimes tetanic convulsions. The effects of the unclassified poisons vary with the particular one ingested.

Among the irritant poisons are: Acids, *e.g.*, sulphuric, nitric, hydrochloric, oxalic; alkalies, *e.g.*, caustic potash, soda, strong solution of ammonia; corrosive sublimate, arsenic, sulphate of copper, salts of tin, tartar emetic, acetate of lead, sulphate of iron and zinc, nitrate of silver, phosphorus, iodine, and creasote.

Among the narcotic poisons are: Opium, belladonna, stramonium, hyoscyamus, hydrate of chloral, chloroform, etc.

The list of unclassified poisons is a long one, but there may be mentioned: Aconite, cocculus indicus, lobelia, digitalis, veratrum viride; the various gases—carbonic, coal gas, illuminating gas, sulphuretted hydrogen, and nitrous oxide.

Some opinion of the nature of the poison may be formed by the practitioner if the following points be observed. Of course one is often at a loss to know, upon the first view of a case, whether the symptoms may not be due to disease, but he must invariably—

(*a*) Compare the symptoms that present themselves in the case with those that are most apt to occur when any of the poisons above mentioned have been taken.

(*b*) Consider the general health of the patient previous to the time of the present attack.

(*c*) Assure himself of the fact that the patient has not been recently exposed to any contagious or infectious disease.

(*d*) Take into consideration the extreme suddenness of the symptoms presented—the spasms, thirst, violent colicky pains, vomiting, fainting, and the vomiting of foreign matters together with the contents of the stomach.

(*e*) Eliminate any recent errors in diet.

(*f*) Note any taste of which the patient may be able to complain.

(*g*) Observe the odor, which in some cases is very noticeable and offensive.

If the person is dead, a careful examination of the body must be made at once, particular attention being given to the following points if the case be one of suspected poisoning:

(*a*) If the party had been previously ill, and, if so, how long? How long from the manifestation of the first symptom till death, and how long from death to the time of autopsy?

(*b*) Note all circumstances that lead to the suspicion of murder or suicide—as the position of the body, and general appearance. Collect all medicines, bottles, powders, etc., in the room and about the person.

(*c*) Collect all vomited matters—especially those first ejected—and preserve in clean glass jars. Inspect the vomited matter for any solid (mineral) that may have sunk to the bottom. If no vomited matter is procurable, and vomiting has occurred on the bed-clothes and dress of the party, cut out portions and preserve them.

(*d*) Apply a double ligature, and cut between them, before removing the stomach and duodenum.

(*e*) Open the stomach in a perfectly clean dish, and estimate the quantity of the contents. Note the presence of blood, mucus, bile, or food.

(*f*) Inspect the throat, œsophagus, and trachea for foreign substances and symptoms of inflammation and corrosion.

(*g*) Observe the contents of the large intestine and rectum for hardened fæces or evidence of purging.

(*h*) Note morbid changes in the lungs—as congestion, inflammation, effusion; in the heart—as contraction, flaccidity, clot, and condition of the contained blood.

(*i*) Observe brain and marrow, and in females the condition of the uterus and ovaries and genital organs. Poisons have been introduced *per vaginam*.

(*j*) Remove stomach, duodenum, liver, gall bladder, spleen, kidneys, rectum, and urinary bladder and contents.

An important point is proof of the identity of the matter alleged to be poisonous. Preserve it from all possible contamination by incautious contact with vessels that are not clean. Preserve under lock and key.

As actual testing for poison in cases of suspected crime ought to be undertaken only by those whose chemical knowledge or skill is the best, the tests are here omitted.

Every circumstance, no matter how trifling, must be taken into consideration in these cases, and every possible clew followed up.

V.

Wounds.—The discussion of this portion of the topic is necessarily imperfect, since the discussion of wounds in all their aspects would require much space and time. The following suggestions are added merely as a guide for the practitioner when conducting an examination.

Wounds may be classified according to the nature of the means by which they are pro-

duced: (*a*) Incised and punctured; (*b*) lacerated and contused; (*c*) gunshot wounds. Again, wounds may be (*a*) homicidal, (*b*) suicidal, or (*c*) accidental.

A solution of the question whether a wound found on the body was homicidal, suicidal, or accidental, will depend upon the examination of the wound itself and the circumstances under which it was produced. Suicidal wounds are produced on those parts most accessible to the hands, and are usually by fire-arms or cutting instruments—most frequently in the head or over the heart. The direction of the wound will help to distinguish a homicidal from a suicidal wound. So also will the position of the body and weapon. The degree of danger attendant upon a wound will depend largely on the extent of injury, the instrument, the violence which the parts have suffered, the size and importance of the blood-vessels and nerves injured, the age and constitution of the individual, and the surgical aid and assistance given. Other circumstances will suggest themselves.

For the purpose of study, wounds may be further considered as "mortal" and "non-mortal." It may be said that every wound is of such a character that death is a consequence of it, or of such a nature that death following it is due to other causes—in which case the wound is "mortal by accident."

A mortal wound is one that by reason of its very nature will admit of no surgical or medical relief. It is one that will surely destroy life of itself, either immediately or after the lapse of a definite length of time. Again, a mortal wound, to be such an one, must be the one and only cause of death in the individual. When a mortal wound is received, the individual is considered a dead man from the time it is inflicted; after-treatment avails nothing. The wound is absolutely mortal.

However, when a wound has been received, and death ensues partly as a result of the wound and partly from other causes, the wound is mortal by accident. A wound of a trivial nature is received—in a quarrel, for example—about the face. In the ordinary course of events erysipelas develops, and, more or less directly as the result of the erysipelas, pneumonia supervenes, and the patient dies. Such a wound is mortal by accident. No little care is demanded in the discovery of the relation of cause and effect in such cases. A wound may of its very nature be non-mortal, yet by some trivial neglect may become mortal. If, for instance, a wound of the skull might be cured by the use of the trephine, and its importance is overlooked, the wound becomes mortal. A concealed hæmorrhage might be controlled, or a wound of the intestines might be repaired, by prompt interference; yet if these be neglected, the wound may prove mortal. The individual may resist and refuse to allow assistance being given, or the attendants may be too slow in calling assistance, and the result is death—the wound itself being non-mortal.

Let us briefly consider wounds of the different parts of the body—whether they are mortal, or mortal by accident only.

Head injuries may prove fatal whether they involve immediately the contents of the skull or not. Erysipelas is apt to follow, and may extend readily to the brain. Prognosis must be reserved. External wounds of the head and face are not absolutely mortal. Internal wounds of the head, whether they involve the brain or not, are not to be considered absolutely mortal. Fractures of the base are not necessarily fatal. Neither are wounds of the substance of the brain necessarily mortal. Their gravity will depend upon: (*a*) Absence of injury to a sinus or great artery—not mortal. (*b*) Large extravasations of blood within the skull that cannot be evacuated; wounds of the temporal region, of the orbital region, and of the base of the skull, are apt to be mortal. (*c*) Superficial, and in some cases deep, wounds of the brain substance itself, are not necessarily mortal. (*d*) Every wound of the cerebellum (deep) and of the medulla oblongata is mortal. (*e*) Wounds of the spinal marrow are almost uniformly fatal, either immediately or indirectly. If the injury be above the origin of the pneumogastric nerve, death is apt to be immediate, owing to suspension of respiration.

Neck.—Wounds of the internal jugular are absolutely mortal. (*a*) When any large vessel is severed, death is usually immediate. (*b*) Wounds of the carotid, lingual, or verte-

bral arteries are usually immediately fatal. (*c*) Incised wounds of the larynx and trachea are not necessarily fatal. (*d*) Wounds of the branches of the carotid artery that can be ligated are not necessarily fatal. (*e*) Division of the principal nerves of the neck or of the œsophagus is usually accompanied by a destruction of other parts more essential to life. (*f*) Fracture of the vertebræ, with injury to the spinal marrow, is usually mortal by accident. (*g*) Luxations of the first and second vertebræ are usually mortal. (*h*) Blows and violent strokes upon the top or sides of the larynx are usually mortal. In some cases they are mortal by accident only.

Chest.—Wounds that do not penetrate the cavity of the chest are not mortal. (*a*) Hæmorrhage in wounds of the chest is almost always internal and is apt to prove mortal. (*b*) Wounds of the lungs are not apt to prove fatal until a considerable period after their reception. (*c*) Wounds of the intercostal arteries are mortal by accident only. (*d*) Wounds of the chest, occasioned by fracture of the ribs and laceration of the soft parts, may be considered mortal by accident only.

Heart.—All wounds that penetrate into the auricles or ventricles of the heart are to be considered mortal. (*a*) So also, all wounds of the coronary arteries, and of the veins that carry blood to and from the heart, are necessarily fatal. (*b*) Wounds of the pericardium are not to be considered necessarily mortal. (*c*) The period at which wounds of the heart prove fatal is variable. (*d*) Death from wounds of the heart is usually sudden, but does not always follow immediately. (*e*) Wounds of the heart and other great vessels of the chest, if the opening is not very slight, are inevitably mortal.

Diaphragm.—Superficial wounds of the muscular portion of the diaphragm are considered mortal by accident only. (*a*) Wounds that pierce the tendons of the diaphragm are absolutely mortal. (*b*) Wounds of the thoracic duct are absolutely mortal. (*c*) Wounds of the cardiac nerves are absolutely mortal. In addition it may be said that wounds that pierce both sides of the chest are mortal.

Abdomen.—Superficial wounds. Severe blows in the epigastric region have frequently been sufficient to cause immediate death without signs of external injury, probably due to violent impression on the solar plexus. (*a*) Blows upon other parts of the abdomen, not accompanied by a solution of continuity, may prove fatal by causing peritoneal inflammation or rupture of an organ. (*b*) Every wound of the abdomen that does not penetrate its cavity is not mortal. (*c*) Wounds of the omentum or mesentery usually are fatal by reason of hæmorrhage or inflammation. (*d*) The natural tendency of wounds in this region is to death, though skillful surgical treatment may save many cases. (*e*) Wounds of the omentum where hæmorrhage cannot be restrained by any surgical effort are necessarily mortal.

Liver wounds vary in their importance according to their extent and situation. (*a*) Superficial wounds are much less important than those that penetrate deeply. (*b*) Wounds injuring the large vessels of the liver are necessarily mortal. (*c*) A rupture of the liver is always absolutely mortal. (*d*) Slight wounds of the liver are not necessarily mortal.

Spleen.—Incised and punctured wounds of the spleen are apt to produce death by hæmorrhage. (*a*) Deep and broad wounds of the spleen are absolutely fatal. (*b*) Rupture of the spleen is absolutely fatal.

Kidneys.—Wounds usually prove fatal by effusion of urine and inflammation. All wounds of the *receptaculum chyli*, and all wounds of the greater vessels and nerves that pass through the abdomen, are considered mortal.

All wounds of the mesentery and of the pancreas are considered mortal by reason of the large vessels that pass near them.

Bladder wounds, where the hæmorrhage cannot be controlled, are considered mortal. Rupture of the bladder is considered mortal.

Wounds of the external organs of generation are not necessarily fatal.

Extremities.—Wounds of the extremities are not necessarily mortal, but sometimes are by reason of profuse hæmorrhage from the larger vessels, or by reason of gangrene that may supervene on a wound.

In forming a conclusion as to the effect of any wound, it is necessary to take into con-

sideration all the circumstances connected therewith.

The rapidity of dissolution, when this is brought on by hæmorrhage, is dependent upon the amount of blood lost and the rapidity with which it is lost. This in turn will be found dependent upon the size of the vessel wounded. Blood escapes more rapidly from a wounded vein than from a divided artery, and venous hæmorrhage is more likely to prove fatal than arterial. Capillary hæmorrhage in some cases is very severe. Age and disease have an influence upon hæmorrhages. A number of small wounds may be as severe in effects as a large one. The escape of blood into the internal cavities of the body must be always considered. Shock from an injury may prove fatal. Mechanical injuries may cause death without leaving any external evidence or causing internal hæmorrhage. A wound that might not otherwise cause death may do so from some diseased condition of the body. Pregnancy renders the prognosis of a wound much more grave. Among the indirect causes of death from a wound may be mentioned tetanus, erysipelas, gangrene, delirium, pyæmia, septicæmia, surgical operations, etc.

As previously stated, all these circumstances must be taken into consideration in reaching a conclusion as to the cause of death, and an opinion is to be expressed only after due investigation and deliberation.

Sandusky, Ohio.

ON CIRRHOSIS OF THE LIVER, AND ITS TREATMENT.

BY PROFESSOR DUJARDIN-BEAUMETZ.

(*Continued from last number.*)

It has been said that we can obtain hints for prognosis from the glycosuria that follows a saccharine diet. Give the patient glucose and look for its presence in the urine, and from the presence or absence of glycosuria decide as to the state of the hepatic cells.

But the problem here is more complex than one would think. When, in a diabetic patient, cirrhosis of the liver supervenes, the diabetes disappears, and this despite a starchy diet. This is easily explained by the destruction of the glycogenic function of the liver.

There is no contradiction between these two facts. You administer glucose to an individual deprived of his hepatic cells; this glucose is not stored away in the liver, and may pass off in the urine. In a diabetic patient, on the contrary, who, by reason of the exaggerated functions of the hepatic gland, fabricates a quantity of glucose greater than that needed to keep up physiological glycæmia, when there supervenes a disease which destroys the glycogenic function the diabetes disappears, despite a starchy diet. On the whole, however, there are conditions which detract greatly from the value of this glycosuria test.

In fact, and in practice, the most important sign is the more or less rapid appearance of the ascites. When the return of the ascites takes place slowly after tapping, or does not take place at all, we are justified in thinking that despite the hepatic changes there remains a sufficient portion of the gland to permit restoration of the circulation and of the functions of the liver.

But this question of the disappearance of ascites in the alcoholic raises another question, which here demands our attention: Is the ascites in alcoholic patients always dependent on cirrhosis?

Clinical facts have replied to this question, and Lancereaux, Thomeuf, Lendet, Hilton Fagg, and others, during the past thirty years, have affirmed that there may exist in the alcoholic a chronic peritonitis with ascites due to ethyl alcohol; and you understand how difficult would be the diagnosis of ascites by peritonitis of alcoholic origin, as distinguished from that caused by cirrhosis.

It is probable that a large proportion of these cases of cirrhosis reported as cured were cases of chronic peritonitis, and especially where the recovery followed tapping.

Besides this chronic peritonitis of alcoholic origin, admitted by a large number of authorities, we must bear in mind that tuberculosis, being a frequent complication of alcoholism, may also cause chronic peritonitis with effusion.

We may now sum up this question by saying that in patients affected with cirrhosis in

the first periods of its development, and in particular in the hypertrophic phase when the hepatic cells are not degenerated or strangulated, we may obtain a cure which will be relative, and this for the following reasons: (1) That the proverb, "*Qui a bu, boira*," is never more applicable than to these cases of cirrhosis of drunkards; (2) the state of incomplete functionating of the liver in which these patients are found renders them very vulnerable—the least exposure to cold, the least excess in diet, may determine new hepatic congestions or even a return of the effusion.

Cirrhosis is *par excellence* the malady of drunkards. In the experiments which I undertook with Dr. Audigé, made for the purpose of developing chronic alcoholism in hogs by the daily introduction of alcohol into their stomachs — experiments which lasted almost three years—if we did indeed determine a great number of the symptoms and lesions of alcoholism, and in particular the morbid alterations of the vessels, we were never able to obtain hepatic cirrhosis; and this was due to the anatomical disposition of the liver in these animals. The dissepiments of the hepatic lobules are very resistant, and protect the hepatic cells from the strangulation determined by the sclerous processes. These were almost the same results which other experimenters have obtained — Sabourin, Lafitte, Strauss, and Blocq, who have been able in the hare to obtain disorders a little more pronounced, but which are at the same time considerably removed from the cirrhosis of Laënnec.

Having discussed these points, it remains for me to take up the really practical part of this lecture, namely, the means to be adopted for the cure of cirrhosis when that is possible. I will begin with paracentesis:

When you are called to treat a cirrhotic patient, it is in the immense majority of cases after the abdominal effusion has taken place, and oppression of the digestive and respiratory functions of the patient has resulted. The pre-ascitic phase generally passes unperceived. Habituated to frequent hepatic congestions, the alcoholic patient minds little at first about the swelling; he pays little attention to the troubles which take place on the part of his urinary apparatus; and even at the onset of the abdominal enlargement he is more inclined to attribute the swelling to corpulence than to dropsy; and this is largely due to the fact that cirrhosis pursues its course from first to last without much pain. When you are called to attend this patient it is because the effusion has become considerable, and the first thing to be determined is whether tapping is indicated or not.

First let us understand that when the effusion exceeds six or seven quarts it is very difficult to get rid of it by other therapeutic means. This effusion hinders the digestive and urinary functions.

Paracentesis is not attended with any danger. It is one of the simplest operations in minor surgery. If, however, there are no immediate, there are certain secondary, accidents which you must have in mind. One of these is hæmorrhage. We often, after tapping, see profuse hæmorrhages of the stomach or intestine. These result from varices of the entire network of the portal vein—varices caused by the arrest of the circulation in the liver. Ulceration is generally lacking, as Debove and Courtois-Suffit have shown. The hæmorrhage must be regarded as a true diapedesis of blood through the walls of the distended veins.

Among the causes which favor this venous hæmorrhage, we may enumerate the local action of alcohol, which irritates and inflames the gastro-intestinal mucosa; and the action of cold, which in producing congestion of the abdomen augments the afflux of venous blood. There are other conditions which act by modifying the abdominal pressure.

When the cirrhotic patient has an abundant ascites, the effusion makes mechanical compression on all the distended network of the portal vein. It acts, for instance, like the elastic stockings which persons with varicose veins wear on their legs, and to some extent opposes the phlebectasis of the portal network. But if we change suddenly these circulatory conditions by withdrawing the quantity of water accumulated in the abdomen, we shall at once provoke a considerable distension of the abdominal network which may give rise to profuse hæmorrhages.

This is not merely theoretical. A cirrhotic

patient, very cachectic, recently entered Cochin Hospital; we tapped him, and two days afterward he died, and the autopsy showed the cause of his sudden death to have been hæmorrhage of the bowels and even the peritoneum. Hence we are warranted in concluding that we ought never to remove too great a quantity of liquid at once in cirrhotic patients, and, moreover, that the fluid should be withdrawn slowly.

Nevertheless, my pupil Caissade has reported a case of cirrhosis where in the course of three years there had been thirteen tappings, giving issue to 800 litres; and Troisier another case where recovery took place after eighteen tappings.

In order to remove the liquid with sufficient slowness, you may employ the Potam aspirator, instead of the large trocars which drain off a large quantity in a very few minutes. I believe that it is also preferable to make successive tappings, rather than to withdraw all the liquid in the abdomen at once. You will, for instance, draw off five liters one day, and in a few days draw off as much more, till the abdomen is emptied. This method is not generally so acceptable to the patient, who prefers to have all the liquid drawn off at one operation.

The success which has attended the slow evacuation of the liquid in cirrhotic patients has led some physicians to think that it would be a good thing to keep permanently patent the opening made into the abdomen. This method, however, has not given very flattering results. Either the opening closes rapidly, despite efforts to keep it patent; or the flow persists, and, under the influence of the incessant oozing, inflammations more or less grave supervene, having for their starting-point the contact of the liquid with the skin. Similar results sometimes follow the capillary punctures which we practice in cases of œdema of the lower limbs and in the last stages of heart affections.

On the whole, then, I believe that the safer plan to follow is that of the repeated partial tappings.

In cirrhosis, tapping of the abdomen is never more than palliative, and when the liquid is reproduced rapidly great exhaustion must result from the enormous drain of liquid, amounting in many cases to as much as twenty to twenty-five quarts. Hence it is desirable to put off as long as possible your interference in these cases, and only to tap when forced to do so by the asphyxia resulting from impeded respiration.

When, on the contrary, the reproduction of liquid is slow, and you can put four, five, or six weeks between the tappings, you can proceed with more boldness. There are patients, in fact, who have stood repeated tappings for years; and I have told you with what reservation we should pronounce the diagnosis of such cases, and we may well ask if cases of this sort which prove curable are not the result of chronic peritonitis?

You can well understand that in cirrhosis death results, not only from the circulatory troubles producing the effusions, the digestive disturbances, and the hæmorrhages, but also from another factor on which writers have not enough insisted: I refer to the suppression of the hepatic functions. This suppression entails a symptomatic aggregate which has been compared to uræmia, and individuals often succumb to a coma very similar to that which is observed in patients affected with suppression of the renal functions.

Next in order of importance in the treatment of cirrhosis is the use of a milk diet. We find in this disease one of the most successful applications of the exclusive milk diet, and in this regard all the authorities are unanimous; and since Chrestien of Montpelier, in 1831, first vaunted the utility of milk in the treatment of abdominal dropsy, down to the present time, all cirrhotic patients have been subjected to this regimen. Milk as a medicine acts in two ways: *first*, as a diuretic, either by the lactose or by the water which it contains; *secondly*, by the small amount of toxines which it furnishes to the economy (the liver of the cirrohtic is no longer antiseptic, and, for this reason, it lets pass into the circulation the toxines fabricated or introduced in the digestive tube); *lastly*, it allays the gastro-intestinal irritation which always exists in alcoholic patients.

Milk is not the only diuretic which has been advised; all have been proposed. It must be admitted, however, that they often fail, and that when the cirrhosis has attained its atrophic phase it is impossible to impart

to the kidneys a sufficient activity to combat the ascitic effusion.

In the cirrhotic patient the serum of the blood passes in such abundance into the peritoneum that the function of the kidneys is found, so to speak, completely arrested.

I shall not enumerate all the diuretics recommended. I will only mention the principal. Millard has much vaunted a potion thus constituted:

Take of:

Juniper berries, 10 parts.
Boiling water, 200 parts.

Infuse, strain, and add

Nitrate of potash, } aa 2 parts.
Acetate of potash, }
Vinegar of squills, 50 parts.
Syrup of the five roots, 30 parts.

M.

I myself employ the hippurate of lime vaunted by Poulet, to combat hepatic congestions. The formula is as follows:

Hippuric acid, 25 parts.
Milk of lime, q. s. to neutralize.
Syrup, 500 parts.
Tinct. aurantii cort., q. s. to flavor.

Dose: A tablespoonful three, four, or five times a day.

Calomel demands a place here, and especially since a triple action has been attributed to it: cholagogue, purgative, and diuretic. You know that since the writings of Jendrassik, which date from 1886, and since the researches of Germain Seé, calomel has been considered of great value in the treatment of cardiac dropsies. It is given in the dose of twelve grains a day as Jendrassik has advised, or eight to ten grains a day as Germain Seé advises, or three or four grains a day as Bouchard recommends. Of course, this treatment cannot be continued longer than two or three days.

I have never used calomel in cirrhosis, for reasons which I have given. I am particularly afraid of the appearance of mercurial salivation which would augment the cachectic state of these patients; nor could we be certain of obtaining any curative effects.

In England and in Russia another diuretic has been much extolled. I refer to copaiba. It is not the balsam which is used, but the resin, the latter being better tolerated by the stomach. The dose of this resin is four grammes (one drachm) per day.

You know that the balsam of copaiba is not a balsam in the strict sense of the word, but a turpentine, composed of an essence—a volatile principle which is eliminated by the lungs, and gives to the breath a quite special odor—and a resin more stable, which is eliminated by the urine; this is copahivic acid. This is what is used, and this acid may be given under the form of copahivate of soda. I have never made use of this substance, which is said to have cured some cases of ascites. It might be worth trying, if other means should fail.

With these diuretics we may associate purgatives; but here there are several reservations to be made. The venous stasis in the portal network causes a veritable œdema of the intestinal mucosa, which entails hæmorrhages, hæmorrhoids, and abdominal fluxes; and when we interfere with too active drastics we considerably enfeeble the patient without conferring any corresponding benefit.

I shall not speak of hydrotherapy nor of electrization, except to condemn them. It is necessary to be very chary in the employment of cold water on the cirrhotic, as the least congestion taking place in the liver brings on a recrudescence of the symptoms. As for electricity, I do not believe that it either effects absorption of the effusion or restores the renal function as has been claimed—and I say this after more than one trial of this agent.

Authorities (and Lancereaux in particular) have long vaunted iodine and iodide of potassium in the treatment of ascites supervening in the syphilitic. We know that syphilis, and in particular hereditary syphilis, entails engorgements of the liver and of the spleen which may be complicated with ascites, and it is easy to understand the utility in such cases of the iodide medication.

But Lancereaux is responsible for the administration of iodide of potassium in alcoholic cirrhosis. He maintains that this medicament opposes the sclerous process on the liver. He advises large doses, as ten to twenty grains three times a day. I am in the habit of prescribing iodide of potassium in beer, in black coffee, or in milk, and always at meal time. It is a good plan, when giv-

ing these large doses, to conjoin the milk diet to favor diuresis and the elimination of the iodine by the kidneys. Semmola, relying on the same principle, advises to give the iodide dissolved in a great quantity of water, and he is in the habit of giving the daily quantity of the medicine dissolved in a quart of water.

Such is the aggregate of means which you can put in operation for the treatment of cirrhosis. You may hope to witness now and then a cure; but this will depend, bear in mind, much more on the state of the liver than on the medicine employed. When you have to do with atrophic livers, however judicious and however heroic may be your treatment, you will have nothing but failure.

THE STRUCTURE OF BLOOD-CORPUSCLES AND ITS RELATION TO PRACTICAL MEDICINE.

BY J. H. WYTHE, M.D., LL.D.

To a general reader of text-books on anatomy and physiology it seems as if the true structure and functions of every organ of the body were certainly known; but actual work in demonstration will soon convince us that there is really no end to investigation in any direction, and that the simplest and most elementary facts can only be established after long and patient research. This is especially true of microscopical structure, or histology, and arises not only from additional experience in the observer but also from greater perfection in the instrumental means employed. Compared with the microscopes of a few years ago, our present instruments have more than doubled our ability to penetrate the arcana of nature. The numerical aperture, or standard measure of excellence, of the best objectives of eight or ten years ago was but .75 or .80, compared with 1.33 or 1.42 of our present lenses, or as a circle of ¾-inch diameter compares with one of 1½ inches. The most recent improvements give a numerical aperture of 1.60. With such additional power of research, nothing but a lack of industry and care can prevent more accurate knowledge of minute structures.

No part of the body has been more frequently examined than the blood, and yet its true structure is but partially ascertained. The simple microscopes of two or three hundred years ago showed the early anatomists the red and white corpuscles floating in the plasma, or serum, and their descriptions have been copied and recopied in text-books ever since; but the improved instruments of modern times have been used to unravel the structure of the corpuscles themselves.

Malpighi, in 1661, discovered that there were floating cells in the blood of a hedgehog, which he mistook for particles of fat. Leveonhoeck, in 1673, first saw the corpuscles in human blood. The leucocytes, or white corpuscles, were first distinguished by Hewson, in 1773.

Torre, of Naples, in 1761, with minute spherical lenses of great magnifying power, examined the red corpuscles, and described them as rings. Hewson, a few years later, showed them to be flat discs, and described the changes of shape which they assume on being exposed to the air as "angular," "rosette," and "stellate" forms. Since the time of Hewson the blood has been studied under a variety of physiological and pathological conditions, and exposed to different physical and chemical agencies. The opinions of observers, however, have been different, and sometimes contradictory, so that it is difficult to arrive at a satisfactory conclusion without careful personal examination. Yet, difficult as it may be to elucidate all the facts concerning the histology of the corpuscles, enough is positively known, and has been long enough in print unchallenged, to prevent such crude and imperfect accounts as are to be met with in text-books of considerable pretension and general excellence. Thus, Flint's Physiology declares "the structure of the blood-corpuscles is very simple. They are perfectly homogeneous." It also describes the leucocytes, or white corpuscles, as "globular, with a smooth surface, somewhat opaque from the presence of more or less granular matter, white, and larger than the red corpuscles." Such descriptions are far from correct.

The optical imperfection of microscopes, and the almost universal habit of using too low magnifying powers, are sufficient to account for discrepancies among actual observers, and a little care will suffice to recon-

cle such discrepancies. Considering the means at their disposal, we cannot sufficiently admire the zeal and patience with which the early microscopists sought for the truth.

Respecting the structure of the blood-corpuscles, a number of facts have been clearly ascertained, while some things are yet under discussion. So much, however, is known as suffices to call in question many of the theories so confidently asserted by the popular science of the last decade, and to point out the true relation between histology and therapeutics.

The white corpuscles are merely embryonic or detached particles of living matter, of different sizes. Heitzman, Klein, and other competent observers, describe this living matter as arranged in a network, the so-called nucleus being a finer or more condensed network than the rest. The structure is plainly enough seen with homogeneous immersion objectives, but less perfect lenses show only a granular appearance. The corpuscles are generally more or less spherical, or oval, but often quite irregular in shape, and have amœboid movements which change the shape from time to time. The conventional pictures which are repeated from book to book give no adequate conception of them.

The red corpuscles are normally roundish flat discs with thick edges, and, by the concurrent testimony of Hewson, Gulliver, Beale, Max Schultze, Woodward, and nearly every other writer, are of different sizes, not only in different animals but in the same animal. Richardson is the only prominent microscopist who holds a different opinion, but as he says he measured "unaltered (*i.e.*, circular) corpuscles only," it is easy to account for his opinion. A single view of red corpuscles in the field of one of our modern microscopes with a power of 1000 diameters or more, will satisfy anyone that, while there may be an average size, very many are above or below that size, rendering the size of red corpuscles insufficient for the purposes of medical jurisprudence.

As to the presence of a nucleus or of an investing membrane in the human red blood-corpuscle, writers differ much, doubtless because of the imperfection of the instruments or nature of the reagents employed.

Spontaneous or amœboid motions, so far as relates to the protrusion or reaction of projections, or bead-like processes, have been described by many observers.

Brucke, Stricker, Lankaster, and others describe the red corpuscle as really double, consisting of a stroma, or matrix, which is permeated by a softer or more fluid substance containing the coloring matter. Treatment with an astringent solution, as tannin, or boracic acid, causes these constituents to separate.

Klein, Heitzman and Flemming describe a fibrillar network in the nuclei of reptile blood, and others speak of fine radial filaments proceeding from the nucleus to the surface.

Elsberg, in Heitzman's Microscopical Morphology, describes the examination of fresh human blood in a 40- or 50-per-cent. solution of bichromate of potash, with a one-twelfth-inch immersion objective and a magnifying power of 1000 diameters. He states that in a short time indentations occur in the red corpuscles, producing irregular and stellate forms, which may persist, or lead to the separation, by constriction, of minute portions, or the corpuscle may become rounded again. After about half an hour protrusion of knobs takes place, which may be again retracted, or occasionally a pedunculated knob may be detached. Sometimes several corpuscles unite, forming chains or compound bodies. Others appear with one or more vacuoles in their substance. In many of the corpuscles may be seen a distinct reticulation of filaments which in the absence of careful focusing are easily mistakable for granules. Some of the corpuscles become pale, and mere rings or "ghosts," detached portions of which accumulate as detritus.

Some years ago the writer of this essay began a series of observations upon the blood-corpuscles, which have been continued from time to time, especially within the past eighteen months, with results analogous to, but even more complex than, those described by Elsberg. Several microscopes were employed, but the preference is given to Zeiss's large stand, or No. 1. In mechanical excellence and freedom from vibration it is unsurpassed. The objectives employed were: Zeiss's F, equivalent to one-fifteenth inch, N. A. 0.85;

Leitz's homogeneous immersion, one-twentieth inch, N. A. 1.25, and one-twelfth, N. A. 1.30; and best of all, one-eighth inch homogeneous immersion of Bausch and Lomb, N. A. 1.40. The eye-pieces used gave magnifying powers varying from 900 to 2000 diameters.

Various solutions were used in the examinations, with similar results, as 1-per-cent. solution of osmic acid, Flemming's solution, and 20 to 50 per cent. of bichromate of potash. The latter fluid gave the most satisfaction. According to Rollatt and Elsberg, bichromate of potash does not alter or seriously impair the living matter, but acts as a preserving medium, and enables us to trace normal development or natural degeneration.

The slides were prepared by putting a very small drop of blood from my finger upon the cover-glass, and quickly placing it upon a drop of bichromate solution on the slide.

The white corpuscles appeared as pale, irregular masses of sponge-like reticulations. Occasionally they were roundish, or ovoid, with traces of a nucleus, but generally the surface of the masses was quite irregular. There was no regularity as to size, but the network of pale fibres was usually well seen.

Many of the red corpuscles were seen as concentric rings in a flat disc, around a central knob or nucleus. Around the outer ring some showed protuberances, as if a semi-fluid substance had exuded or had been squeezed out of the corpuscle. These protrusions differed both in number and appearance. By the use of the Abbe condenser, turned a little aside from central illumination, there were glimpses of radial spokes, or fibres radiating between the rings.

Although the structure of the red corpuscles above described was always seen in some discs, it was by no means uniform. The shape and size of the discs varied greatly. They were oval, square, triangular, finger-like, and sometimes branched, but nearly all exhibited traces of ring structure. Many were knobbed with irregular protrusions, not only on the edge of the disc but also on the flat surface, as described by Elsberg. Eventually the protrusions seemed to be confined to the edges. Many of the protrusions became detached from the corpuscle; some of these would remain at rest, while others showed amœboid changes of shape, and would rotate, or move across the field of view in different directions.

Portions of protruded semi-fluid substance of irregular size would remain for some time attached to the edge of a disc, then with vibratory or oscillatory motion would detach themselves and form independent masses, some stationary and others quite mobile. Some were attached to the disc by a fibre or thread, and often such a thread would bind three or four masses together. In one instance two masses pulled apart so as to form quite a lengthy fibre. In others the fibres formed a tail, with serpentine movements, or would entirely separate from the mass. Careful focusing showed some of these fibres to be really chains of small granules, many of which appeared as scattered detritus. So similar were these granules, isolated or in chains, to micrococci, that they would would have been deemed such if they had not been seen to have stripped themselves from the edges of the viscid red corpuscles.

Considering the various offices which the blood performs in the animal economy, embryonic, nutritive, metabolic, and excretive, we may reasonably expect the structure of the corpuscles to differ, and the effect of chemical and physical agencies upon them to be far from uniform. The more embryonic forms may not exhibit the fully formed structure, while those engaged in carrying away effete matter may be ready to disintegrate. Thus we may account for the variety in the appearance of the corpuscles, and for the ready decomposition of some, while the structural integrity of others longer persists.

The relation of the structure of blood-corpuscles to practical medicine deserves attention, although the subject is too extensive to allow more than a few hints in the present essay. The discoveries in bacteriology have been so numerous and so brilliantly heralded as to almost eclipse the no less important discoveries in relation to ptomaines and leucomaines. These alkaloid products of albuminoid decomposition, the former without and the latter within the body itself, have a more direct influence in ætiology than bac-

teria. The irritant or poisonous properties of pathological bacteria depend chiefly, if not wholly, upon the ptomaines which result from their decay, but the leucomaines produced from decomposing albuminoid detritus or secretion may be just as irritant and poisonous. Whether the particles of degenerated bioplasm resulting from decomposing blood-corpuscles or other structures, are capable of independent activity and growth by culture, as are micrococci, may be impossible to demonstrate, but it is not unreasonable. Many years ago this form of the germ theory was suggested by Dr. Lionel Beale, and the discovery of specific bacteria by no means sets it aside. In the present state of pathological chemistry, there can be no doubt of the production of leucomaines by the decomposition of blood-corpuscles, which, unless eliminated by excretion, will lead to auto-infection, or an alteration of vital structure or function by a blood-poisoning originating within the body.

The influence of vitality, or that condition of the bodily organism which we call life, should not be overlooked. Dr. T. M. Prudden has recently shown that blood serum and non-inflammatory transudations in the living human being possess a marked germicidal power; and the significance of this discovery consists chiefly in recalling "the attention of therapeutical adventurers from germicidal warfare to what appears to be a natural defense of the organism against bacterial invaders, namely, a healthy condition of the blood." Dr. Prudden expresses well our own views in the following paragraph:

"Proud of our already long list of well-defined bacterial species; consciously masters of the morphology of many forms of bacterial disease; well on the way to an intelligent and efficient prophylaxis, and glorying in the possession of ptomaines so definite as to enter at our will into the composition of tangible and even formulatable metallic salts, it is a little humiliating, though doubtless salutary, to find ourselves face to face with a series of phenomena which seem to lie at the very basis of the knowledge of the acute infectious diseases, and yet be able to say only: They are the result of the vital forces, vitality, life. It is fortunate that we have these words and phrases, however, which conceal so much and express so little, since under their cover we may take breath for the assault on another of Nature's tantalizing and well-fortified secrets."—*Microscopical Bulletin*, February, 1890.

In this connection we may refer to an examination made a few years ago, by the writer, of the blood-corpuscles in eighteen cases of beri-beri, which had been transferred from a Brazilian corvette to the Marine Hospital in San Francisco. A full account, with microscopic illustrations, may be found in the annual report of the Supervising Surgeon-General at Washington. The surgeon in charge sent specimens of blood from each patient, and the examination showed that the red corpuscles were in various stages of decomposition. Although but a moderate magnifying power was used ($\frac{1}{6}$-in. obj.), the ring structure of the broken cells and the resemblance of the detritus to micrococci were evident. The clinical history of each case fully confirmed the microscopical examination, although the patients themselves had not been seen, and the slides of blood-drops were merely numbered from 1 to 18. Acting upon the suggestions of the microscope, iron and quinine were prescribed in large doses, with generous diet. Under this treatment the blood-corpuscles of the patients speedily recovered their normal appearance, and in a short time all the seamen returned to duty.

It is not unreasonable to anticipate that familiarity with the changes and relative constituents of the blood-corpuscles, under the highest powers of the best microscopes, will afford reliable assistance in diagnosis, and indicate in many instances the best plan of treatment, especially in constitutional diseases.

Oakland, Cal.

PYOSALPINX COMPLICATED WITH UTERINE FIBROID—OPERATION—RECOVERY.

BY J. M. HALLY, M. D.

Miss F., aged 22 years, unmarried, called upon me with the following history: At the age of 13 years she menstruated, and did so every month regularly and without pain for a year. After that time she began to have pain in her back, constipation, loss of appe-

tite. Micturition was accompanied by excruciating pains, the suffering at times being almost unbearable, especially around the region of the uterus and base of the bladder, which felt, as she said, "as if the bottom were falling out of it." Menstruation became scanty and irregular, and she suffered a great deal from shooting pains in the pelvis and down the thighs, which increased in frequency and severity in direct ratio to the irregularity of the menses. At times walking was almost impossible, from the suffering it caused. She was very emaciated, and had that peculiar expression of countenance so indicative of ovarian lesions. Much as she had suffered, she had never allowed a physician to examine her. I explained to her the necessity of an examination in order to arrive at a satisfactory knowledge of her trouble and how to treat her intelligently.

By a vaginal examination I discovered the uterus enlarged to about the size of a four-months' pregnancy, and slightly movable. The left tube and ovary felt quite large and very painful. The right side was not sensitive, and the appendage on that side seemed of normal size. By questioning her I learned that she had frequently had chills, and I became convinced that the case was a salpingitis or pyosalpinx complicated with an intra-uterine fibroid. She was informed that her only hope lay in operative procedures, as her case was one which lay within the domain of surgery. To my surprise I found her anxious to undergo an operation for the removal of the ovaries, or whatever was thought best after section of the abdomen had been made. I hoped by removal of the ovaries, if it were found that both were in a condition to require their removal, to stop the growth of the tumor by cutting off its blood supply.

The time for the operation was set at three weeks after the diagnosis was made, the interval being devoted to preparing the patient, which preparation consisted of rest in bed, and nourishing food. The day of operation having arrived, four hours prior to the time of operation she received a cup of coffee and a glass of milk, and every hour a teaspoonful of good whiskey; this had a good effect in sustaining the heart and obviating shock. The abdomen was shaved, and scrubbed with soap and water, washed with ether, and rubbed over with iodoform. The patient had been bathed the day before, and the bowels thoroughly evacuated by purges of sulphate of magnesia. The anæsthetic used was chloroform.

At 12 o'clock, assisted by Drs. Walsh and Coburn of Denver, and Dr. Graves of Chicago, I made an incision in the median line about two and a half inches long, cutting slowly through the intervening structures until the peritoneum was reached. This was picked up with forceps and incised, the incision being continued on a grooved director for a distance corresponding to the external cut. On passing the index and middle fingers into the cavity, the ovary was felt imbedded in a mass of adhesions, which were, after a good deal of trouble, broken up, and the ovary liberated and pulled to the outside of the abdominal wound. The organ was considerably diseased, the tube containing two pus cavities. The pedicle was tied, cut off, and the stump, after being thoroughly cleansed with "Marchand's peroxide of hydrogen," allowed to drop into the cavity. The other ovary was more easily found, and as it had an unhealthy appearance it was treated in the same manner.

The cavity was now flushed with hot water, and the wound in the abdominal wall closed with six deep sutures, which included all the structures thereof.

A wick of iodoform gauze was left in the cavity and protruding from the lower angle of the wound, for drainage. Several adhesive strips were applied across the wound to lessen the strain on the sutures. About a dozen layers of antiseptic gauze, and a binder snugly pinned, completed the toilet of the abdomen. The patient was given a hypodermatic injection of strychnia, put to bed, and surrounded by bottles filled with hot water; she rallied nicely.

A tendency to vomit was controlled by peppermint-water; thirst allayed by sips of hot water. The bowels were moved next day with sulphate of magnesia. Milk constituted her nourishment. At no time did the pulse exceed eighty-eight beats per minute, or the temperature run over 100° F.

Convalescence was fairly rapid, with nothing worthy of note to mar its progress.

In about four months after the removal of the uterine appendages, the tumor having shown no signs of shrinking, and hæmorrhage being free—and had been at times excessive, even to the point of being alarming—and the patient anæmic from the drain on her system, despite every effort which had been made for her medicinally, it was decided to try once more what relief could be obtained through surgical interference.

So on the twentieth of November, 1891, with the assistance of Dr. John E. Walsh and Dr. Edward J. Walsh, I removed the growth. The vagina was washed out thoroughly with a bichloride solution, and the patient anæsthetized. The tumor was grasped with volsellum forceps and pulled down to the vaginal outlet. Passing my fingers in between the tumor and the uterine walls, and using considerable force, all attachments were broken loose except the pedicle, which sprung from the right side of the uterus. The pedicle was severed with long scissors curved flatwise. Where the growth sprung from the walls of the uterus, the adhesions being extensive, hæmorrhage was rather copious, but was finally controlled by douches of alum and gallic acid in solution.

Douches of boracic acid and borax in solution were used for several days three times a day. Recovery was uneventful.

I have recently seen the lady, and she feels as well as ever she did at any time in her life.

Denver, Col.

THERAPEUTIC APPLICATION OF ETHEREAL ANTISEPTIC SOAP.

BY CHARLES T. YOUNG, M.D.

I was consulted by a young man who told me he had been treated unsuccessfully for the itch for about four months. On examination I found the scabies covering almost the entire body. I prescribed one bottle of ethereal antiseptic soap. After using it for three days, the itch ceased to trouble the patient, and after ten days I was able to pronounce him cured.

I have used this soap in three other cases affected with scabies, with results equally as good as the one reported above

For cleanliness Johnston's ethereal antiseptic soap has *no equal*.

Correspondence.

MEDICAL PROGRESS IN NEW YORK.

[Special Correspondence].

New York surgeons are using the microscope extensively while operating upon mammary cancer. By its use the operator knows just what tissue and how much of it to remove. In removing any tumor of the breast, the malignancy of which is not evident from the physical signs and clinical history, the first thing that is done after making an incision is to remove a small portion of the growth and have a competent assistant examine it microscopically by making frozen sections. This process requires but ten minutes, and while it is being done the operator is removing the growth. If it is found to be malignant, the original incision is extended along the lower border of the pectoralis major to its insertion into the humerus, and the axillary glands removed whether they be involved or not, as well as the pectoral fascia and part of the muscle. The extent of involved neighboring tissue is then ascertained either by making frozen sections of the skin of the breast and underlying tissues, or by following the method proposed by Stiles of Edinburgh; this method is to take a portion of the suspected tissue, and, after washing it, allow it to remain in a 5-per-cent. solution of nitric acid for ten minutes—the acid changes the normal tissue so that it appears translucent, while the infected part remains opaque. Any neighboring tissues that are thus found to be infected are removed.

At a recent meeting of the Practitioners' Society of New York, at the Academy of Medicine, a discussion took place between the prominent physicians present on the question of a milk diet in continued fevers. It was the general opinion of Drs. Beverly Robinson, A. H. Smith, Robert Abbe, and W. H. Polk, that an exclusive milk diet in typhoid, as was so generally advised by doctors, led to much harm. They all thought that such a diet prolonged the fever, and all reported cases in which convalesence at once set in on giving solid food. The objection brought up against milk was that it fermented and irritated the existing ulcers. It

was shown that solid foods if properly prepared were not solid after leaving the stomach, and were in no condition upon reaching the ilium to irritate typhoid lesions. They claimed that a patient on a milk diet was hungry, and that hunger itself, being a form of pain, kept up the temperature; but that solid food, properly given, relieved this pain, hence lowered the temperature. It was mentioned that in former days a patient who was to have his abdominal cavity operated upon was restricted to a milk diet for two days before and for ten days after the operation, and that often disastrous results which were attributed to shock and sepsis were due to inanition. The foods that were suggested as a substitute for milk were stale bread, scraped meat, baked potatoes, bouillon, fermented milk, beaten egg, wine jelly, and junket.

Resorcin is gaining popularity in the treatment of chronic gastritis. The cases in which it fails are those in which there is some organic derangement, biliary calculi as a cause of the gastric disturbance, or a neurotic element, as epilepsy, hysteria, or insanity; but in cases where the neurotic element is caused by the gastritis, resorcin works admirably. The drug is also used much in the treatment of gastric ulcer, and seems to give marked beneficial results. Sick-headache and megrim dependent on gastric trouble are prevented by the use of resorcin, although a present attack is not relieved. Resorcin is administered in five-grain doses, well diluted, half an hour after each meal. The drug is not repulsive to the stomach, and combines the properties of an antiseptic, antiferment, and germicide. Like carbolic acid it is a local anæsthetic, and this may explain its action in relieving nausea. Prof. W. H. Thomson is very enthusiastic over the drug, and has prepared statistics of seventy-eight cases, taken from private practice, in which he used resorcin, all of which were markedly improved except those dependent on an organic lesion, a neurosis, or calculi. Resorcin is soluble in alcohol, oil, ether, and water, but not in chloroform.

New York City, Jan. 5, 1893.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., JAN. 10, 1893.

Editorial.

THE ENTHUSIASM OF HEALTH.

Sir James Paget has recently discussed the subject of implanting "an ambition for renown in health," comparable with that for bravery, beauty, or success in athletic games. The London Lancet, in commenting on this, considers what this means, and makes an appeal for further enthusiasm in this direction well worthy consideration.

The subject is one which may be viewed in two different aspects. In the one case health, like the other qualities above mentioned, is regarded as a comparative rarity. As such it must appeal to the sense of admiration in minds of every type, even the most ordinary, and persons of strong physique would then stand out from the half-dead level of pallid humankind like rocks on a sandy shore. Sir James Paget's view takes in the subject from another point. It is that of minds higher than the ordinary in respect of their physiological knowledge. He would raise the most ordinary to the level of these, and would thus awake in them the slumbering sense of self-preservation in the matter of hygiene. "After virtue, knowledge," said Goethe, thus laying the foundation of his desires in healthy morality; and what virtue was in his ideal of mental satisfaction, health is in the physical system. What were beauty, athletic success, or even bravery—that is, physical courage—without this foundation? We can hardly credit their existence in such a case. A short and perishing life they might have, that is all. Their best and most enduring forms cannot be thus established.

The intelligent ambition which appreciates this fact is certainly a feeling to be fostered by every possible means, and we are pleased to think that its culture is in these days

increasingly cared for. Hitherto many sins have been committed against the body by persons who knew no better. Thanks to the extension of science-teaching, these are becoming plainly visible to the eye of reason. What we still want is the development of a yet keener sense than ordinary knowledge, an anxiety to live aright, an enthusiasm to learn and to obey the true law of our nature, moral and physical. We see more of this than formerly. We do not so tamely submit to the cramping tyranny of fashion. We are less easily gulled by the deceit of "wild oats." Even that capricious child, Society, submits many of its habits to sanitary rule. Yet there is room for improvement. The tide of enthusiasm must rise higher.

AN ENCOURAGING REPORT OF THE MICHIGAN STATE BOARD OF HEALTH.

The general health is unusually good. In his quarterly report to the State Board of Health, stating the conditions of health and sickness in Michigan during the last quarter of 1892, the Secretary of the Board reports:

Compared with the average in the corresponding quarters in the six years 1886-1891, the reports received from regular observers indicate that no disease was more than usually prevalent in the fourth quarter of 1892, and that smallpox, inflammation of brain, cerebro-spinal meningitis, measles, typho-malarial fever, intermittent fever, erysipelas, remittent fever, whooping-cough, inflammation of bowels, membranous croup, dysentery, pleuritis, and puerperal fever were less than usually prevalent.

There does not seem to be sufficient change in meteorological conditions to account for all of this lessened sickness. It seems quite possible that this remarkable freedom from sickness in Michigan during the last quarter of 1892 may be largely attributable to the extraordinary amount of sanitary work done for the purpose of preventing the introduction of cholera, and of lessening the danger from that disease should it gain entrance to this coountry.

It is reasonable to believe that the thorough disinfection of all baggage of immigrants at the Michigan border should lessen the introduction and prevalence of all communicable diseases, that the surveillance of immigrants at their destinations by local health officers has aided in this direction, that the attention given to public and private water supplies has lessened the sickness from autumnal fevers, and that the general cleaning up, which has been more thorough than ever before in Michigan, has lessened the sickness from nearly all diseases. An important aid to this general purification has been the house-to-house sanitary inspection, which the State Board of Health has recommended nearly every spring for several years, but which was never so much done, especially in Detroit, as during the summer of 1892. The prediction by sanitarians, that work to prevent the introduction and spread of cholera would be recompensed through the lessening of other diseases, seems to be verified; not only has cholera not occurred in Michigan, but the sickness statistics show a remarkable lessening throughout the entire list of diseases. This supplies evidence of the importance of continuing the work, even after cholera ceases to threaten.

A LABORATORY COURSE IN CHOLERA-DIAGNOSIS.

The directors of the Carnegie Laboratory, 338 East 26th street, New York, Alexander Smith and Frederick S. Dennis, announce to health boards, health officers, and properly accredited medical men, that, in view of the possible advent of cholera in this country during the coming summer, and the great importance of biological examinations in the diagnosis of the disease, they have arranged for short courses on this subject. It is designed that these courses shall have the same general scope and fulfill the same purpose as the cholera courses given at the Hygienic Institute in Berlin, by Prof. Robt. Koch, in 1886 and 1887. They will be under the direction of Dr. Edward K. Dunham, who has worked considerably on cholera in Germany and, recently, in this country.

It is extremely desirable that there should be medical men throughout the country who are trained in the biological diagnosis of epidemic cholera; so that if doubtful cases appear in any locality, there may be at hand men competent to at once make satisfactory

biological examinations. The first cases of Asiatic cholera in the beginning of an epidemic are always doubtful cases; and it is only by means of biological examinations that a definite conclusion can be reached as to their nature.

The courses will begin about the 20th of the present month, and each course will continue for about two weeks. The fee, to cover expenses incurred, will be $25.00. Applications for admission to the courses should be made in advance to the Directors of the Carnegie Laboratory.

THE BICYCLE FROM A MEDICAL STANDPOINT.

Some discussion by correspondents in the columns of THE AGE as to the evils of bicycling, and especially the impropriety of females undertaking this means of locomotion, has led the writer to investigate the subject.

While this investigation has not been exhaustive, it would seem to indicate that the prevailing sentiment is voiced in favor of this modern invention. One author, T. H. Carmichael, M.D., who has given considerable attention to the investigation of this subject, says as to indications and contra-indications:

As a form of exercise, its growing importance makes it a subject for discussion by the medical profession, in order that its advantages and disadvantages may be understood and its indiscriminate use and abuse prevented.

In riding a wheel correctly, the whole muscular system is exercised—the muscles of the trunk and upper extremities in the act of balancing, and the extensors and flexors of the leg in the act of propulsion.

In the wheel, therefore, we have an agent that may play an important part in the rôle of preventive medicine. Especially is it applicable to that large class of diseases characterized in middle life by interstitial changes in various organs, such as lungs, liver, and kidneys. Many of these cases can be diagnosed in advance, as they usually give evidence in early life through their overfondness for nitrogenous foods and a tendency to myalgia in various parts—these myalgic pains being usually due to faulty elimination of waste material, and its consequent irritation. In many instances such patients lead sedentary lives, and thus aggravate their condition.

The exercise of cycling helps these cases by supplying the oxygen necessary for the elimination of the waste material, and by so stimulating the excretory organs that they are enabled to perform their functions in a normal manner and thus prevent the gouty manifestations of middle life.

In the equally large class of nervous diseases bicycle-riding is just as efficacious. This subject has been ably discussed by Dr. G. M. Hammond, in an article on "The Bicycle in the Treatment of Mental Diseases," in the January, 1892, number of the Journal of Nervous and Mental Diseases.

Varicosed veins have disappeared after a course of riding, several cures having been reported.

In chest troubles, especially lack of expansion of the lungs, it is very valuable—more so than most forms of calisthenics, because the cyclist usually seeks a healthful suburban atmosphere, and the lungs are invigorated by the pure air.

The too rapid accumulation of fat can be readily controlled by taking long rides and at the same time abstaining from liquids.

On the contrary, moderate use of the wheel, avoiding hill-work and freely satisfying the thirst produced by riding, usually produces a gratifying increase in weight.

The advantages of bicycling apply to both sexes. With loose-fitting garments and a proper mount, refraining from riding during the menstrual period, moderate use of the wheel will do much to maintain good health in women.

Seneca Egbert, A.M., M.D., Lecturer on Hygiene, Drexel Institute, Philadelphia, in the University Medical Magazine, November, 1892, makes a strong plea for the cycle, and points out its therapeutic application.

In the first place, as an exercise cycling is superior to most, if not all others, at our command. It takes one into the out-door air; is entirely under control; can be made as gentle or as vigorous as one desires; is active and not passive; takes the rider out of himself and the thoughts and cares of his

daily work; develops his will, his attention, courage and independence, and makes pleasant what is otherwise often most irksome; moreover, the exercise is well and equally distributed over almost the whole body, and, as Parkes says, when all the muscles are exercised, no muscle is likely to be over-exercised. This general muscular exercise also has its direct effect upon the other and vital organs of the body, especially the heart, lungs, and digestive organs; and the improvement in general health and digestion after a few weeks' riding is by no means illusory or fleeting. We all know that the trouble with many of our patients is purely functional, and that their maladies have been brought on by lack of pure air, too little exercise, and too much mental worry over their work or business. For these the bicycle furnishes an agreeable remedy.

Take a case of nervous or anæmic dyspepsia, of hepatic or intestinal torpor; the increase in the flow of the blood current, the gentle vibration, and the additional elimination of waste matters through lungs and skin, all results of a ride on the wheel, are just what we desire for the cure of our patient. Or with one of a tuberculous diathesis or with incipient phthisis, how much depends upon teaching him to breathe properly, *i. e.*, fully and deeply, and to spend much of his time in the open air! This the bicycle will do for him, perforce. Cases, also, of neurasthenia, melancholia, and other nervous troubles, will derive much benefit from our present hobby, for, in addition to the above hygienic elements, the wheelman must develop—whether he will or not—his will, his independence and self-reliance, and the accurate control of all his muscles. Those of rheumatic tendencies, especially, will find that regular and systematic riding will do much to keep the disease in abeyance, and even to act as a cure. Someone has said that every muscle is a little heart; and surely no better means can be devised of eliminating deleterious waste matters from the whole system than the general and active use of all the muscles, voluntary and involuntary.

Undoubtedly, the excessive use of the bicycle or tricycle by very young children is not advisable. Bad habits of position and carriage are only too readily acquired at this age, and there is danger of serious muscle strain and possibly nerve injury. Another fault is that parents too often purchase a machine too large for the child in order to save the expense of a new one the following year, the result being that both the weight and the power needed to propel it are in excess of the child's abilities. Moderate riding on a proper wheel need not, however, be forbidden. For older boys and girls there is probably not the same danger, though intelligent supervision is never harmful, and especially watchfulness for incipient harm is advisable with girls about the time of puberty. Even at this time the bicycle may do good by drawing a too studious or house-loving youth or maiden into the open air and active exercise.

VIRCHOW'S ADDRESS TO THE UNIVERSITY OF BERLIN.

Professor Virchow's scholarly address on methods of education and research should be a stimulus to all those interested in teaching medicine and allied arts and sciences.

He appealed to the higher schools to kindle the "love of learning" rather than stuff their scholars with much information of a positive and detailed kind. Moreover, he called upon them to send up scholars *competent for independent study*, young men able to pursue their own course of work, not leaning upon others, not needing special stimulants at the hands of their teachers.

In modern teaching he regarded mathematics, philosophy, and natural science the prime methods—"the golden triad" upon which progress rests. From them would be derived that large wisdom which the Ionian Greeks taught us to desire. In the schools, therefore, youths must be led to study the principles of astronomy and biology in their simpler aspects, for astronomy is the pattern of mathematics and physics, and in chemistry they must learn the art of experiment. Yet weight and measure are not all. How shall one, he inquires, whether theologian, jurist, physician, or schoolmaster, consider psychology who has not learned the forms of thought? If philosophy cannot be taught in schools, they must teach "respect for philosophy."

Book Notices.

A Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure. By Joseph M. Mathews, M.D., Professor of Principles and Practice of Surgery, and Clinical Lecturer on Diseases of the Rectum, Kentucky School of Medicine; Visiting Surgeon Ss. Mary and Elizabeth Hospital; Consulting Surgeon Jennie Cassaday Free Infirmary for Women; late President Mississippi Valley Medical Association; President Louisville Clinical Society; Vice-President Louisville Surgical Society; Member International Medical Congress, American Medical Association, Southern Surgical and Gynæcological Society, Kentucky State Medical Society, State Board of Health of Kentucky; Orator of the American Medical Association on Surgery, 1891, etc. With six chromo-lithographs and numerous illustrations. Published by D. Appleton & Co., New York. 1892.

This book of 537 pages is the record of Dr. Mathews' experience of fifteen years as a rectal specialist. It is rich in fertile and highly useful and practical suggestion as to the examination, diagnosis, and treatment of this prevalent and often badly managed class of diseases.

The author deserves great credit for his original manner of treating the subject. He introduces several chapters new to books on this specialty. These are: Disease in the Sigmoid Flexure; The Hysterical or Nervous Rectum; Anatomy of the Rectum in relation to the Reflexes; Antiseptics in Rectal Surgery; A New Operation for Fistula in Ano by a "Fistulotome."

It contains six excellent colored plates, showing clearly operations for hæmorrhoids, for fistula in ano and prolapsus ani, and sixty-four other illustrations elucidating the text. It is the most helpful and useful book on the subject the writer has read, and it is commended to all who want not theory but definite details as to rectal practice based on an exceptionally large experience by a virile and fruitful observer.

Scribner's Magazine for 1893.

Frances Hodgson Burnett will contribute the first serial to appear in a magazine from her pen for many years, entitled "The One I Knew the Best of All."

H. C. Bunner will furnish a series of six sketches entitled "Jersey Street and Jersey Lane." (Illustrated.)

Robert Grant will relate the further experiences of Fred. and Josephine in "A Sequel to the Reflections of a Married Man." (Illustrated.)

Harold Frederic will contribute a political novel of great power, entitled "The Copperhead."

Miss S. B. Elliott, the author of "Jerry," will write a realistic story of life among the Tennessee mountaineers, "The Durket Sperret."

Personal Reminiscences.—Some unpublished letters of Carlyle to Edward Irving and others, dealing with a part of Carlyle's life far different from that brought out in the recent literature of Carlyle reminiscences. Recollections of Lincoln and Sumner, by the late Marquis de Chambrun. Both articles are full of new matter. An Artist in Japan, by Robert Blum, who has just returned from a residence of nearly two years in that country; abundantly illustrated by the author. Historic Moments, which have been a feature of the magazine during 1892, will be continued by some particularly striking papers, among them several by the great war correspondents, William H. Russell, Archibald Forbes, and others.

A series of articles on the life work of men in many callings—the chief ways (exclusive of professions) in which men earn their livelihood—will appear during 1893.

A series will be published later in the year giving the impressions made by the World's Fair upon different observers of note, both American and foreign; and many of these observers will be also artists who will illustrate their own articles.

Among miscellaneous articles will be found further contributions to The Poor in Great Cities; Mrs. Burnett's illustrated paper on the London plan for Home Aid to Invalid Children, etc. Of special interest also will be Professor Heilprin's authoritative account of the Peary Relief Expedition (illustrated), a very interesting article by Octave Uzanne on the exhibition of Woman's Art now going on in Paris, and articles upon artistic subjects, accounts of travels, etc., etc.

The illustrations of the year will represent the work not only of the well known illus-

trators, but many drawings will also appear by artists who are best known as painters.

Terms: $3.00 a year; 25c. a number.

Special offer. The numbers for 1892 and a subscription for 1893, $4.50; the same, with back numbers bound in cloth, $6.00.

Now is the time to subscribe.

Address Charles Scribner's Sons, 743 Broadway, New York.

Physiology. By Frederick A. Manning, M.D., Attending Surgeon Manhattan Hospital, New York. Series edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, New York; Visiting Surgeon Bellevue Hospital, New York. Pocket size, 12mo., 201 pages, 69 illustrations, $1.00. Philadelphia: Lea Brothers & Co.

The present book is a brief summary of the salient features of human physiology. It is not intended to compete with or to take the place of the more elaborate text-books. The idea has been to present the subject in such a manner as to fix in the memory facts already learned in less limited treatises.

There is no claim of originality for this book. It is practically and of necessity an abstract of standard works, and principally of those of Dalton, Foster, and Kirke. The arrangement has, in a general way, been made to conform with that of the last-named authority. The cuts are, many of them, from Dalton's Physiology. Doubtful questions have often been referred to Foster, whose text-book of physiology is the reference book of a large proportion of the schools. Some of the histological descriptions are derived from Prudden's Practical Normal Histology.

It discusses general considerations and proximate principles; the blood; circulation of the blood; respiration; digestion; absorption; animal heat; secretion; the mammary glands; the skin; the kidneys and the urine; the vascular glands; muscle; nutrition; nervous system; the nerves; sympathetic system; spinal cord; the medulla oblongata; the pons varolii and crura cerebri; the cerebrum; the cerebellum; the cranial nerves; the senses; touch; taste; smell; hearing; sight; embryology; reproduction; development; parturition; table of the development of an embryo; chemical tests used commonly in physiological analysis; metric system.

The Home-Maker Magazine for January.

The Home-Maker Magazine for January is an unusually attractive number. The frontispiece is a very artistic engraving of "The Gypsy Girl."

The leading article is "The Rookwood Kiln for Firing China," by Lida Rose McCabe. Following is Jenny June's "Notes of a Short Trip Abroad," which has created such wide-spread interest during the past few months as a series running in this delightful magazine. Following we name most of the articles appearing in the January Home-Maker:

"The Gypsy Maiden," frontispiece; "A Modern Helen de Hanquit Genlis," by Lida Rose McCabe; "Songs from Sighing" (poem), by E. H. Chase; "Notes of a Short Trip Abroad," by Jenny June; "The Poe Monument and Memorial Volume," by Marion V. Dorsey; "Artemisia, Types of Heroic Women," by Mattie E. Pettus; "The Fall of Jason" (continued), by Willis George Emerson; "Eastern Lullaby" (poem), by Livingston B. Morse; "Mrs. Florence Howe Hall," by Lexington; "Parbleu" (poem), by Dora Read Goodale; "Up-Hill" (continued), by Emma D. Connelly; "An Original Romance" (poem), by Katherine Van Harlingen; "The Love of Loves" (poem), by Florence May Alt; "A Woman's Shoe," by Mazeen; "Meg," by M. C. Aymar; "My Love" (poem), by Essie Swem; "The Great Bed of Ware," by Linda Bell Colson; "Topics of the Time," by Helen Leah Reed; "The Garden," by George Ethelbert Walsh. Decorative Home Art: "The Cosey Corner," by Robert Dulk; "Home-Made Picture Frames," by Virginia Vassar; "A Sideboard," by Mary R. Wilkerson; "Dick's Fagot Party," by M. M. M. With the House-wife: "On Three Hundred a Year," by Ella Rodman Church; "A Housekeepers' Convention," by Anna B. McMahan; "Little Dinners," by J. J.; "Dainty Dishes with Oranges in," by Katherine B. Johnson; "Chats with My Girl Friends," by Mrs. G. A. Paull; "Homes and Home Building," by Frank P. Allen. Our Young People: "A Boy Hero," by Mrs. Elizabeth A. Vose; "Our Ned" (poem), by Willis George Emerson; "New Year's Eve in Owldom;" "Health Hints," by Susanna Dodds, M.D.; Library;

Correspondence and Queries; Notes of Various Interests. The Home-Maker Co., 36 Union Square, New York.

MANUAL OF PRACTICAL MEDICAL AND PHYSIOLOGICAL CHEMISTRY. By Charles E. Pellew, E.M., Demonstrator of Physics and Chemistry in the College of Physicians and Surgeons (Medical Department of Columbia College), New York; Honorary Assistant in Chemistry at the School of Mines, Columbia College, etc. With illustrations. Published by D. Appleton & Co., New York. 1892.

The author, in company with Prof. C. F. Chandler, visited or interrogated most of the leading medical colleges in this country and abroad with a view to determine the course of practical chemical instruction to be adopted for the coming term.

Believing there was too much pure chemistry and too little medicine in the course for students usually adopted, it was decided to prepare a course, limited by the size of the laboratory and the length of the term to thirty lessons, in which as far as possible every subject and every test should have some bearing upon the student's other work.

It is very practical and complete, and contains twenty-eight illustrations and eight plates.

Its 314 pages are fruitful reading, and deserve general adoption as a reasonable and satisfactory method of teaching the necessary and useful facts of medical and physiological chemistry.

CONTENTS OF NEW ENGLAND MAGAZINE FOR JANUARY, 1893.

"Amelia B. Edwards: Her Childhood and Early Life," by M. Betham-Edwards.

"The Story of a Clock," by Amelia B. Edwards.

"John Ballantyne, American," I-II, by Helen Campbell.

"The Oldest Episcopal Church in New England," by Alice Morse Earle.

"The Home in the Tenement-House," by Lucia True Ames.

"Lost at Sea," by James A. Tucker.

"Modern Architecture," by Barr Ferree.

"Ye Ancient Burial Grounds of Boston," by Albert Scott Cox.

"The Orchard Path," by Alice Williams Brotherton.

"James Parton," by Julius H. Ward.

"Harvard's Youngest Three," by Eliot Lord.

"Why Songs are Sung," by James G. Burnett.

"The Other Mother," by Adeline Van Nostrand Dorr.

"At Whittier's Funeral," by Caroline H. Dall.

"Dame Periwinkle Speaks," by Elizabeth B. Walling.

"The Lights on Harvard Bridge," by Agnes Lee.

"In the Old South State," by Lee C. Harby.

"The Philosophical Basis of Fiction," III, by Walter Blackburn Harte.

INTERNATIONAL MEDICAL ANNUAL.

E. B. Treat, publisher, New York, has in press for early publication the 1893 International Medical Annual, being the eleventh yearly issue of this extremely useful work.

A glance at the prospectus gives promise that the 1893 issue will be better than any of its predecessors.

There are thirty-eight distinguished specialists in its corps of editors, carefully selected from among the most eminent physicians and surgeons of America, England, and the Continent.

It arranges in a practical way for ready reference what is worth preserving of the year's medical literature, together with a number of important papers specially written, and will contain over 6,000 references to diseases and their remedies, many illustrations in black and colors being used where helpful in explaining the text.

The service rendered by this work, giving the year's progress in medicine and surgery so conveniently and at so low a price ($2.75), cannot be overestimated. Altogether it makes a desirable investment for the practitioner.

A TREATISE ON SURGERY.

Moullin's Text-book on Surgery was first published in April, 1891. So favorable was its reception by the medical profession and press that in a little over twelve months it was recommended at more than twenty medical schools, and the large edition which had been prepared was exhausted.

Early last summer, Presley Blakiston & Co., the Philadelphia publishers, were fortunate in securing the services of Dr. John B. Hamilton, formerly Surgeon-General of the Marine Hospital Service, now Professor of Surgery at Rush Medical College, Chicago, as editor for a new edition. He has now almost completed his work, and within a short time it is expected to place before the medical public the book generally revised so as to represent surgery as it is today, with a number of new and beautifully colored illustrations printed with the text.

Its broad principles are stated in a clear, authoritative manner, the relative value of the different subjects has been carefully considered, and about the whole there is an air of responsibility that renders plain the fact that the author knows whereof he speaks, not only from his own experience, but from an acquaintance with American and foreign literature.

NOTES ON THE NEW REMEDIES, THEIR THERAPEUTIC APPLICATION AND MODES OF ADMINISTRATION. By David Cerna, M.D., Ph.D. Published by W. B. Saunders, Philadelphia, Pa. 1893.

A timely and very excellent book of 168 pages, well indexed, and giving the best *résumé* yet issued of information regarding many of the products which are accumulating so fast as to confuse the medical reader. It is alphabetically arranged, and most convenient for reference. It should have a large sale among both practitioners and students of medicine, pharmacy, and chemistry who want to keep themselves posted as to the physical properties, solubility, therapeutic application, and administration of the latest additions to materia medica. Dr. Cerna had made his selections with rare discrimination.

THE NOVELIST HOWELLS' FUTURE PLANS. —It is authoritatively announced that Mr. Howells has entered into a contract with The Ladies' Home Journal, whereby his most important work will, for some time to come, first see print in the pages of that magazine. His new novel, "The Coast of Bohemia," begins in the Christmas issue of the Journal, and immediately upon its close Mr. Howells will begin in the magazine a series of editorial autobiographical papers, in which he will trace the influences which led him to a literary life, his course of reading, and his favorite authors and books. The articles will practically tell the story of the famous novelist's life, and promise to possess in a rare degree that attractive interest which always attaches itself to the life of a successful man when told by himself. Howells had his early struggles; his early resources were few, and these he will trace among other things in these articles, describing, too, how he mastered four different languages to acquaint himself with the literature of the countries most attractive to him.

"CHARACTERISTICS," by S. Weir Mitchell, M.D., LL.D. (Harvard), which has already run as a serial in the Century, has been charmingly reproduced in book form by the Century Co.

It is unlike many books in that it lacks plot and *denouement*, but is rather an entertaining sketch or story of the characteristics of human nature, as they are impressed upon the fancy of an organization such as the author must possess from birth, environment, medical experience, and observation of human nature.

He dissects the emotions of humanity from rather a cynical point of view, and portrays the motives, actions, inspirations, and effects of such manifestations as are exhibited when men and women are subjected to the modifying influences of love, hate, art, music, literature; he also discusses the graver topics of health, sickness, life, and death.

The book certainly affords food for thought, and is calculated to interest, if not indeed to fascinate, the intellectual modern of the nineteenth century who is more or less *blasé* in his attitude toward literature.

The volume is bound tastefully in cloth, gilt top, and contains 307 pages. It may be obtained from the Century Co. for $1.25.

Among other books received are: "Addresses and Essays," by G. Frank Lydston, M.D. "Physiology," by Frederick A. Manning, M.D.; "Eye, Ear, Throat, and Nose," by Drs. Frank E. Miller, James P. McEvoy, and John E. Weeks—both fresh numbers of The Students' Quiz Series of Lea Brothers & Co.

Notes and News

The Doctor's New-Year Dream.*—

A doctor sat by his office fire
On a dreary New-Year's eve;
And fancy coming, at his desire,
A beautiful vision did weave.
He dreamed that patients, the future year,
Would be treated for numerous ills;
In slumber he dropped a grateful tear,
As he saw them settle their bills—
Bills! Bills!
For Pills! Pills! Pills!
As he saw them settle their bills.

"At last my day of triumph's come,"
The doctor murmured, in sleep;
"I'll drive two horses, own my home,
No more hold my services cheap,"
He saw his rivals, Brown and Jones,
Gaze at him with jealous eye;
There were tinglings of joy in his marrow-bones
As he passed them proudly by—
By! By!
Head High! High! High!
As he passed them proudly by.

Behold! before him a table spread!
Good Lord! 'twas a sight to view—
Sparkling champagne, Burgundy red,
Side by side with a terrapin stew,
With lobster salad, quail on toast,
With Blue Points on the half-shell,
Devilled crabs and a venison roast—
When "Bang!" rang the office bell—
Bell! Bell!
Oh Hell! Hell! Hell!
When "Bang!" rang the office bell.

"A patient!" he said, in joy aloud,
And flung open the outer door.
There stood a figure in wintry shroud,
The ghost of the year before.
"Luck to the New!" it murmured low,
"Only wait and bide your time."
And it faded away in the glistening snow,
To the sound of the New-Year's chime—
Chime! Chime!
Calling Time! Time! Time!
To the sound of the New-Year's chime.

Then the doctor closed his office door,
From a bottle some whiskey drew,
And, kneeling piously on the floor,
Did make him a magical brew—
Nutmeg and sugar, hot and strong,
True medicine, full of good cheer—
Then trolled out a merry bucolic song:
"Here's luck to a Happy New Year!"—
Year! Year!
Cheer up! Cheer! Cheer!
"Here's luck to a Happy New Year!"

*T. C. M., in the Cincinnati Lancet-Clinic, Dec. 31, 1892.

Ballade of Old Remedies.—

Where are the remedies of old
That Cardan or that Celsus knew?
The Magisteries Salmon sold?
Herbs that in Gerarde's garden grew?
Where sage, or euphrasy, or rue?
Mandragora, or hellebore?—
The very names might turn one blue!
Where are the remedies of yore?

Where's Mithridate? or where the bold
Bad messes Digby used to brew?
Where that elixir rare of gold
That Ripley "against Nature" drew?
Where *theriacæ* not a few?
"Brewits," and broths, and baths galore?
And things to lick, and things to chew?—
Where are the remedies of yore?

Where are the drinks to cure a scold?
Where each rejuvenating stew?
Decoctions hot, infusions cold,
Prepared with incantations due?
Alack, they all have vanished too!
The charm and periapt charm no more;
They're gone with Circe and her crew!—
Where are the remedies of yore?

L'Envoi.

Friend! see in this thy fate foretold!
O'er all thy pharmaceutic lore
The wave Lethean shall be rolled:—
Where are the remedies of yore?

—*Chemist and Druggist* (*Meyer's Druggist*).

Anus Preternaturalis.—

To obviate the difficulties attendant upon suture of the bowel in the establishment of an anus preternaturalis, Chaput (Archives Gén. de Médecine, October, 1892, p. 442) recommends the substitution of serre-fines or hæmostatic forceps for sutures. After the induction of local anæsthesia by injections of cocaine, the necessary incision is made, and the bowel is brought out of the abdominal cavity with a pair of artery-forceps; eight serre-fines or hæmostatic forceps now grasp the bowel, the peritoneum, and the deep layer of muscle at as many points. The loop of bowel is irrigated with a solution of zinc chloride 1:10, and an incision of three-fifths of an inch is made in it. The lips of

this incision are kept apart by a catgut suture on either side, and an antiseptic dressing is applied. The hæmostatic forceps or serre fines are removed at the end of twenty-four hours. The method has been successfully employed in four cases.—*Philadelphia Medical News.*

Should Doctors Marry?

The New York Record discusses the question apropos of an expression on the subject by a misogynistic North Carolina doctor in the negative.

The position taken by this critical gentleman is that woman is the cause of many professional failures, and that she should be taken very cautiously. A loving and angelic wife may, he thinks, be a trifle exacting; and the cherubic infant sometimes produces insomnia, mental unrest, and a condition generally not suited to serious study and work.

Oh ye 2,000 doctors of the feminine persuasion who are said to be practicing medicine in the United States, can you not come to the rescue of the doctors' wives, and show that doctors had been brutes without those lovely creatures who were in hours of grief and woe their ministering angels?

Tetanus Cured by Curara.—

B. V. Kasaviah, in Indian Medical Record, November, 1892, reports the following case:

A young woman (primipara), after accouchement, was placed under treatment for lock-jaw, when subsequently distinct symptoms of emprosthotonos set in, which were treated by various antispasmodics, but without avail, and her case was consequently considered as incurable and hopeless. Curara was resorted to as a last resource, and the patient, I am glad to say, was cured by six subcutaneous injections of 1 in 12; the dose being 2 minims twice daily.

A New Occupant of the Chair of Gynæcology at the Chicago College of Physicians and Surgeons.—

Dr. H. T. Byford will succeed the lamented Dr. A. Reeves Jackson as Professor of Gynæcology at the College of Physicians and Surgeons, Chicago.

Therapeutic Brevities.

A New Drug with Specific Action on Lupus.—The discovery of the eclectic action of *Thiosinamine* upon diseased tissue, by Dr. Hebra, has awakened very great interest on account of the value that the new remedy apparently possesses in the treatment of lupus, caries, necrosis, and other inflammatory processes. Thiosinamine is prepared from the volatile oil of mustard by heating a mixture of two parts of the oil, one part of absolute alcohol, and seven parts of liquor ammonia (sp. gr. .960), in a water bath at 40° C. for several hours. In the trial cases which Hebra undertook, two to three divisions of a Pravaz syringe, equivalent to 5 to 7 grains thiosinamine, were injected twice weekly. With these small quantities a visible improvement in the disease was apparent, although in lupus of not very extensive character the reaction was often so slight as scarcely to be observed. In the case of inflammatory affections of the eyes it was sufficient, however, to considerably increase the inflammation, the intensity of the reaction being in inverse proportion to the extent of the process. With lupus patients the dose was increased in the third week to half a syringeful, and in the fourth and fifth weeks to a whole syringeful, of the 15-per-cent. solution, the latter dose being continued for two or three months, so long as the typical reaction occurred and the cure was not completed. - *Notes on New Remedies.*

Treatment of Strumous Cicatrices of the Neck.—Calot (Rev. de Chir., May 10th) reports two cases in which he has obtained good results by operation. In the first case the whole of the scarred skin, which measured 4 centimetres by 3, was dissected up, together with about 1 to 2 millimetres of the surrounding normal integument. This was removed, and the edges of the wound were freed for a short distance, and then completely united with sutures, no drainage of any kind being employed. The result was very satisfactory, the original scarred surface being replaced by a fine cicatricial line, which was scarcely visible. In the second case the same method was adopted, with a similar good result. Calot proposes the same plan for scrofulous ulcers, and also for ulcers which are kept up by the presence of a suppurating gland. He advises total removal of the suppurating gland, along with the surrounding ulcerating tissues and skin, and then close suture of the wound and no drainage.

Tetanus Treated Successfully by Antipyrin.—Caviana and Venturoli (Riforma Medicale, 1892) record two cases in which the administration of antipyrin, in large doses, seems to have contributed largely to the ultimate recovery of the patients. It is true that chloral was given at the same time, but the authors do not judge that drug to have been the essential part of the treatment, for the spasms were only modified as long as the antipyrin was taken, and recurred when chloral alone was given. This is by no means the first case recorded in which antipyrin has been reported as successful in tetanus, and it may well be that, even if it be not actually curative, it does good by enabling the patient to live through what would otherwise be the fatal course of the disease, while the toxine is being eliminated by the ordinary channels. —*University Medical Magazine*, January, 1893.

Vaselin in Middle-Ear Affections.—Delstanche (Sem. Méd., November 30th) speaks in high terms of the value of instillation of liquid vaselin in certain middle-ear affections. He says it has no bad effects of any kind, and he has discarded all other modes of treating plastic inflammations. It is also a most useful adjuvant to, and sometimes even a substitute for, paracentesis for the removal of accumulated secretions in the tympanum in chronic middle-ear catarrhs. In the first stage of acute median otitis, vaselin injections are said to relieve pain instantly, and to bring about recovery in five or six days. Delstanche adds that the same treatment is of surprising efficacy in purulent middle-ear affections, especially if iodoformed vaselin is used.—*British Medical Journal*, Dec. 24, 1892.

A Practical Sterilization Apparatus for Surgical and Bacteriological Uses.—In the Centralblatt für Chirurgie, No. 39, S. 788, Kronacher gives a description of a sterilizing apparatus for instruments, etc. It is made of copper, and has for its object the use of both moist and dry sterilization. The instruments are placed first on a removable tray and immersed in the hot soda solution and boiled. The vessel containing the hot solution is then removed, and the articles to be sterilized replaced in the apparatus and subjected as long as desired to dry heat.—*University Medical Magazine*, January, 1893.

Oil of Saw Palmetto.—This oil is expressed from the fruit of the *Sabal serrulata* in the same manner as olive oil is extracted from the olive. Its sphere of usefulness is very extensive. Internally in combination with mantine it is superior to cod-liver oil as an alterative and promoter of nutrition. As a topical application in all catarrhal affections of the nasal passages, the pharynx, larynx, and bronchi, it is superior to any other medicament. Applied on tampons of wool or cotton it is an admirable remedy for leucorrhœa, erosion and ulceration of the cervix. It should be combined with alboline, benjoonel, glycerin, or vaselin, one part to ten.—Dr. E. M. Hale, in *New Remedies*.

Dermatol in Balanitis.—Dr. A. F. Pattee, of 94 West Springfield street, Boston, Mass., states that he has had great success in treating balanitis with dermatol mixed with water, the mixture being painted on the part affected and allowed to dry, which occurs very rapidly, forming as it were an artificial skin, and soothing the inflamed part. He uses dermatol also in humid forms of eczema as a dusting powder, and mixed with water he finds it a very satisfactory medicament.

Ulcerated Chilblains (Ointment).—

℞ Carbolic acid, 1 gramme (15 grains).
Lead ointment, } ää 20 grammes
Lanolin, { (5 drachms).
Sweet-almond oil, 10 grammes (2 fl. drs.)
Lavender spirits, 20 drops.

M. Apply two or three times daily.

—*Merck's Bulletin.*

External Hæmorrhoids.—Anæsthetize the skin and mucous membrane with cocaine, applied on cotton. Pass a finger into the rectum, and inject six times, half a syringeful of cocaine solution, 2 per cent., between the mucosa and the cellular tissue around the rectum, avoiding the veins. When complete anæsthesia has been produced, introduce a speculum and dilate the sphincter.—*Times and Register*, Dec. 10, 1892.

Kola in Chronic Infantile Diarrhœa.—

℞ Kola extract, 1 gramme (15 grains).
Quince syrup, 30 grammes (6 fluidrachms).

M. To be taken within twenty-four hours, by the teaspoonful.

—*Merck's Bulletin.*

Medical Progress.

THE TREATMENT OF ULCERS BY STRAPPING.—Just one hundred years ago a good surgeon of Bristol, England, Baynton by name, gained more lasting glory than falls to the lot of most medical men, by describing a new method of treating ulcers by the use of adhesive straps. After the lapse of a century it seems permissible, without evincing disrespect for things ancient, to suggest that his method, although to-day given without essential modification by all surgical authorities, may possibly be improved upon. In extenuation of my own digression from work essentially medical, I can only plead an inherited love of all things mechanical and an early surgical training.

Fourteen years ago, on entering a surgical service in Bellevue Hospital, I received the honor, with a pride many will appreciate, of having placed under my sole care the usual goodly number of old stock ulcers, after due instruction in established methods of strapping.

For many weeks these same old sores received more faithful attention than often falls to the lot of such cases. As time wore on, however, while the ulcers mostly failed to wear off, neither youthful enthusiasm nor a reasonable sense of duty sufficed to gild them with the rosy hues of earlier days. An attempt to make practical the results of some self-questioning as to what indications were being fulfilled, was met with such stern reproof from an omnipotent "House" that further experiments were postponed until they could be conducted under the mantle of authority. The method then developed from an application of mechanical principles to the recognized indications I have practiced and taught to my private students for the past thirteen years.

However valuable or generally available in hospital service recent methods of skin-grafting may be, the chronic ulcer has not yet become a thing solely of historical interest. That it may be cured in most instances in a small fraction of the time required under the common methods of strapping or bandaging, I know. I therefore take the liberty of recalling the indications for the use of adhesive straps, and pointing out the necessary method of their application to most completely fulfill these indications.

Adhesive straps can fulfill these indications:

1. Approximation of ulcer margins: Thus diminishing the cavity to be filled by granulation, the surface to be covered by cicatrization, and the subsequent injury from contraction. Such approximation implies the production of more or less cutaneous tension; and unless such tension is uniform, circulation and local nutrition will be impeded. It is impossible to produce even moderately uniform cutaneous tension by the old method of strapping

2. Compression: Either for absorption of inflammatory exudate and new tissue, or to restrain exuberant and prevent fungoid granulations. Such compression also must be uniform and elastic.

3. Support of tissues: Thus favoring circulation and nutrition.

4. Relief of tension and bending in cutaneous border of ulcer: The most important indication as bearing on local nutrition, and the one which common methods of strapping most completely fail to fulfill.

To attain in the most satisfactory manner and degree the foregoing indications, the following method of strapping will be found competent:

1. Adhesive straps should not be over one inch in width, and usually a narrower strap is to be preferred.

2. Straps should be as short as is consistent with a firm hold on healthy skin, and should never fully encircle the limb.

3. All straps should be applied at *right angles* to the long axis of the ulcer, subject to slight modification by the direction of greatest cutaneous elasticity, and are to be adjusted in two sets.

First Set.—These straps are applied in the usual manner, by fixing one end on healthy skin and approximating the edges of the ulcer as the other end is applied and fixed.

The first strap of this set should *bisect the ulcerated surface.*

Each succeeding strap of this set should bisect uncovered ulcerated surfaces.

As any strap becomes loosened, one end should be freed and reapplied under appropriate tension.

Straps should be applied in this manner until the uncovered strips of ulcerated surface are narrower than the straps in use. The second set is then applied.

Second Set.—Each strap of this set is to be applied from its centre to both ends simultaneously under appropriate tension, so as to cover an exposed strip of ulcer, and overlap two adjacent straps of the first set. To accomplish this, the straps are held by both ends and adjusted while being firmly stretched.

The degree of tension under which these straps are applied will depend upon the tension under which the first set have been adjusted. If applied under too high tension,

they will cause puckering of the straps of the first set.

When it is desired to have the tissue compression especially even, it is well so to arrange the first set of straps that the strips of ulcer to be covered by the second set are reduced in width to a narrow line. Even when this is done it is quite as well to use at least a half-inch strap for the second set. When the strapping is completed, openings for drainage may be made as necessary.

The essential factors in the foregoing method are:

1. The straps are all applied in the same direction, that of the desired traction, and therefore render their full adhesive value.

2. No two straps are allowed to come in contact until the second set is applied. As the major part of the effect depends upon the first set of straps, this principle of non-contact is of the utmost value. As succeeding straps relieve the strain upon those already adjusted, any loosened strap can be detached and reapplied without disturbing others, and thus each strap made to exert its equable portion of tension and compression.

3. To gain the most even results, this condition of equal strain should be maintained from the outset of the strapping rather than attempted after all the straps of the first set are applied.

The results which can be obtained by careful and intelligent use of the above method are so far superior to those by any other measures as to leave little if anything to be desired.—Charles E. Quimby, M.D., in *Medical Record*, Dec. 31, 1892.

A New Form of a Valuable Hematinic.—In the Times and Register for September, 1891, the writer published an article upon iron, its chemistry, pharmacology, physiological and therapeutic action. The various forms and preparations of iron intended to meet the demand for its pleasant and effective administration, especially the more recent preparations, were noticed, the following being of the number: The peptonate, the albuminate, Ferrum saccharatum, levulose ferride, dialyzed iron, the malate, ferrum sanguinis, and the elixir of the succinate of iron. Their merits and demerits were set forth.

The albuminate, introduced from Europe in 1878, met with little favor in this country, some claims in its favor made by Dumont not having been sufficiently substantiated.

The peptonate, being, like the albuminate, a weak and a not readily assimilable preparation, has been little used.

Ferrum saccharatum and *levulose ferride* have been used more or less, but do not seem to fulfill the requirements for a strong iron preparation.

Dialyzed iron, at one time very popular, was upon extended trial proven to be practically inert as a therapeutic agent. It found its best use as an antidote to poisoning by arsenic, but even here it was inferior to the old hydratic oxide.

Malate of iron, also at one time somewhat popular, has not held the place obtained for it.

Ferrum sanguinis is a French preparation made from bullock's blood. The writer has had no clinical experience with this form. Expense, in connection with an iron preparation especially, must be considered with the majority of patients.

Salicylate of Iron.—Its use has not apparently been very extended. In some conditions it may be very useful.

The Succinate of Iron.—This valuable salt of iron has been suspended in an elixir which I have used quite freely and with most excellent results. Patients that could not take other forms of iron, readily assimilated this with marked benefit.

In the article in The Times and Register above referred to, in comparing the effectiveness of the various preparations of iron, I spoke of the old tincture as follows:

"The tincture of the chloride of iron is such a valuable preparation that we cannot afford to abandon it, and yet there are many cases and conditions in which its use is prohibited, owing to its styptic and astringent properties. Cannot some of our enterprising pharmaceutical chemists give us a form or modification of this old standard tincture, deprived of its objectionable features without impairing, in any way, its efficiency?"

This has been done by Parke, Davis & Co., Detroit. It gives the writer great pleasure to be able to state that the syrup of the chloride of iron has been introduced by the house above mentioned, which more nearly meets the requirements indicated than any other yet formulated. It is sufficiently strong, containing forty drops of the officinal tincture to the fluidounce, is palatable, non-styptic, and has no corrosive action on the teeth.

One of the most serious objections to the use of the officinal tincture of iron is that it contains a large amount of free hydrochloric acid. It is this free acid which is so destructive to the teeth. A fact not probably sufficiently understood, is that this corrosive action on the lime salts of the teeth is heightened by diluting the tincture with

water, as ordinarily administered. That such is the case has been proved by experiments upon teeth placed separately in the strong officinal tincture, and in some when largely diluted with water; the first, for chemical reasons which we have no space to explain, showing little if any destructive action, while the latter rapidly attacked the lime salts of the teeth.

Professor Attfield has shown by conclusive experimentation that the presence of this free acid is not necessary for a perfect solution of the basic salts of iron, and also that the therapeutic effect of the chloride of iron does not depend upon the free acid.

From the above it will be readily seen that the absence of this free acid in the syrup is of inestimable value in the administration of this the most valuable of our hematinics.

In this connection it must be remembered that the action of the remedy is not desired, when used internally, until it reaches the stomach, when, coming in contact with the hydrochloric acid of the stomach, its effects are as prompt and decisive as when the strong styptic tincture is used.

Furthermore, I have found frequent cases when the tincture could not be taken, the stomach rebelling against even small doses, but the above syrup was well digested and a decided improvement manifested.

I have given the syrup of the chloride of iron in doses of one teaspoonful (containing five drops of the tincture) to one tablespoonful (equaling twenty drops), to be repeated as often as may be desired.

It may be necessary at times to rapidly instil iron into the system, when a full dose may be given every fifteen minutes for some hours with good effect.

When we remember that twenty-five minims of the officinal tincture contains nearly three grains of the metal, and that the total amount of iron in the whole mass of the blood of a healthy person does not exceed 2.48 grammes, or about thirty-nine grains, it will be seen that it would take but a few such doses as the above to introduce an amount of iron far in excess of the normal quantity, provided it were all assimilated. That but a small proportion of it is taken up, is well known.

Another fact in this connection must, however, be kept in mind, and that is that this assimilation is in proportion to the amount ingested in a rapidly increasing ratio. Thus, if ten grains of iron be given, one grain will be absorbed; if twenty grains be given, five grains will be taken up, and so on to a certain extent. This is why such large doses are sometimes administered, and with such decided benefit, the effect being proportionate to the dose. The advantages a preparation of iron easily administered will possess when comparatively large doses are desirable, seem to be fully shown in the syrup under consideration. This syrup of the chloride of iron will blacken both the teeth and the tongue to some extent, but much less so than when the tincture is used; but simply blackening the teeth does not indicate an injurious effect, as the discoloration is readily removed and the teeth found to be intact.

A few especial uses of the syrup of the chloride of iron may be mentioned.

In diphtheria, where the chloride of iron is essentially necessary, this form of it will be found especially serviceable, as children will readily take it but will utterly refuse the tincture. Give two teaspoonfuls every hour or two.

In anæmia push the remedy. It will improve the appetite and digestion. This is one of the peculiar properties of iron as a tonic and stomachic when administered in a proper form.

In strumous enlargements of the cervical, inguinal, and mesenteric glands, give this preparation freely.

In tuberculosis, in connection with cod-liver oil and creasote, these iron tonics will be found to be invaluable. They part readily with their oxygen when introduced into the system, and in consumption the blood is especially in need of this substance.—Dr. W. H. Walling, in *Times and Register*, Dec. 3 1892.

A New Method of Checking Bleeding After Tonsillotomy.—A year or so ago I read a paper, written by Professor Delavan, of this city, upon the subject of tonsillar hæmorrhage. In this article he has collected and discusses a very considerable number of expedients for governing the bleeding in this complication.

I was surprised not to find mentioned therein a method which I have taught my classes in operative surgery for several years past, and which seems unquestionably prompt efficient, and easy of application, and is, furthermore, in my judgment, practically the best and wisest of the mechanical plans with which I am acquainted.

Although the expedient—which is presently to be explained—was of my own devising, yet it seemed so self-evidently the thing to do that I took for granted the assumption that others must also have thought of the method and published it long ago.

Since reading Professor Delavan's paper, however, I have made some inquiries, and, not finding the plan mentioned in any book at hand, Dr. Otto J. Müller, of 206 East 104th street, this city, has recently obliged me by spending a day in the Academy of Medicine library, looking up this question in English, German, and French literature. He states that he finds no mention of the plan which I am about to detail.

Briefly, it consists in surrounding the bleeding surface with a stout purse-string ligature, of silk or catgut, which when tightened is entirely hidden in the tissues about the tonsillar stump.

The surgeon selects a large needle, preferably semicircular in shape, and a needle-holder. The mouth is held open by a cork between the back teeth. Four stitches are now introduced. Less than two minutes is needed for this.

When the free ends are drawn upon, the loops disappear. The ligature is now tied tightly enough to stop bleeding, and the ends cut moderately short. The thread may either be left to slough out, or (and probably preferably) may be cut and removed in twenty-four to thirty-six hours.

As to the distance to which the needle penetrates, the two transverse strokes may enter to about one-quarter inch in depth. The two vertical ones, running parallel with the carotids, could, if desired, probably be passed with safety rather more deeply—though there would seem to be no special advantage in this.

It is not necessary to include the pillars of the fauces in the grasp of the thread. The two vertically-placed stitches run, of course, very near the pillars, but not really in their substance.

Regarding the source of hœmorrhage after tonsillotomy, of one thing we can be certain, namely, that it never comes from either of the carotids. The external and internal carotids are very nearly equidistant from the tonsil, and behind it; the nearer, the internal, being rather more than half an inch away (1.5 cm.); the external being, say, three-quarters of an inch (2 cm.). If a tonsillotome be used, cutting either of these vessels is a mechanical impossibility.

At least six arteries supply the tonsil; all being branches, indirectly, of the external carotid. Of these the largest, as a rule, are from the ascending pharyngeal and the ascending palatine.

Fatal bleeding from tonsillotomy is practically unknown. But bleeding to the verge of syncope, long continued, and severe enough to alarm most seriously the relatives and friends, if not the doctor—this is not so rare by any means. In such cases (in addition to nearly a dozen lesser mechanical devices) even ligation of one or another of the carotids has been advised, and actually practiced; although of these vessels, tying the external carotid alone would seem rational, and that, too, only at a point between its first two branches—the superior laryngeal and the ascending pharyngeal.

However, with such a certain, safe, and easy device at hand as that which has herein been described, so severe a measure as cutting down and ligating a carotid can never be needed. Indeed, it would seem wisest to use the buried tonsillar ligature without waiting and wasting time and blood while trying less sure plans.

The nearest approach to this idea which the writer has anywhere found is a method suggested by Dr. E. W. Clark, of New York, who has run two large needles through the bleeding base, and, leaving these in place, wrapped a ligature firmly around them. Manifestly, even if this were equally as certain in effect, it would be quite as difficult to do as the writer's device, and must be much more annoying to the patient while in position. Indeed, the side of the tongue would be likely to be lacerated against the sharp needle-ends unless in some way these were covered.

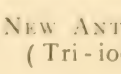
The suggestion has also been made to seize with a volsellum forceps the bleeding surface, and, drawing firmly upon it, tie a ligature about it. I have in one instance tried this, and found the ligature repeatedly slipping off in spite of my best efforts. Indeed, as there is nothing like a stump or pedicle left (if the tonsillotomy has been properly performed), such slipping is almost unavoidable.

I only mention this latter plan as being the other of the two which remotely resemble the method upon which this paper has been written.—R. H. M. Dawbarn, M.D., in *Medical Record*, Dec. 17, 1892.

Arrest of Hæmorrhage After Tooth-Extraction, by Hot Water.—Dr. Julius Scheff, Jr., of Vienna, according to the current number of Ash's Quarterly Circular, recommends strongly the use of hot water for arresting hæmorrhage after tooth-extraction. "We are accustomed," he writes, "to stop hæmorrhage by the method that has been used for generations—viz., by the direct application of cold water to the wound. Practitioners started with the idea that heat caused expansion of, and induced

increased bleeding from the vessels, and that, on the other hand, cold caused contraction. In an ordinary case of extraction, hæmorrhage from the arteria dentalis, or from the gums and periosteum, soon ceases; but it frequently happens, even when the patient does not suffer from hæmophilia, that there is difficulty in arresting the flow of blood." Dr. Scheff mentions three cases occurring in his practice in each of which there was a history of profuse hæmorrhage after extraction. "I allowed one patient," he says, "to take a great quantity of cold water, and yet there appeared not the slightest diminution in the bleeding. I then took a glass syringe and continuously applied hot water in drops to the wound, from which the blood previously trickled without cessation. After a few seconds the bleeding diminished, a coagulum was formed, and the bleeding finally ceased. With the second patient I used hot water at once, and the flow of blood was arrested. In the third case the wound had been bleeding freely for a long time; I plugged the alveolus with iodoform gauze, and on removing the plug the wound bled afresh. I then employed hot water; the hæmorrhage ceased and did not recur." Dr. Scheff applies the hot water by means of a syringe, injecting it by drops into the socket of the tooth. The arrest of hæmorrhage in surgical operations by the application of heat is a recognized resource, and it would therefore seem that this principle might with advantage be applied in cases of tooth-extraction, especially as the mouth is able to bear a very high temperature without inconvenience—in fact, water so hot that it causes pain when the finger is inserted in it will in many cases be tolerated by the mouth.—*London Lancet*, Nov. 12, 1892.

Losophane, a New Antiseptic Dermic. —"Losophane" (Tri-iodo-meta-cresylic acid)—



—is the name given to a new antiseptic dermic obtained by the action of iodine upon oxy-toluylic acid in the presence of alkali. It contains approximately 80 per cent. of iodine, and forms white needles of a melting-point of 121.5° C. [250.7° F.]; it is easily soluble in ether, benzene, or chloroform, but difficultly in alcohol. At 60° C. [140° F.] fatty oils dissolve it readily.

Dr. E. Saalfeld, of Berlin, has recently experimented with losophane in the treatment of various cutaneous affections, and claims to have obtained in certain cases, particularly in dermatoses of parasitic origin, some very encouraging results. The medicament was employed either in solution or in ointment—according to the following formulas (Ther. Monatsh.):

Losophane, 1 part.
Alcohol, 75 parts.
Distilled water, 25 parts.

Externally!

Losophane, 1–3 parts.
Lanolin, 80 parts.
Vaselin, 20 parts.

Externally!

The treatment with the new medicament was the most efficacious in tinea tonsurans, in pityriasis versicoloris, and in scabies. It also gave satisfactory results in prurigo, in a number of cases of chronic eczema with thickening of the skin, in sycosis, and in acne. Its antipruritic action was very manifest in the above-mentioned affections, while in a few cases of idiopathic cutaneous pruritus and of urticaria this was much less pronounced. In the cases of psoriasis and of syphilitic chancre the losophane had no curative effect.

The new dermic is contra-indicated, according to the author, in all acute inflammatory diseases of the skin, where it is very apt to act as an irritant even when employed in very feeble concentration.—*Merck's Bulletin*, December, 1892.

Myrtle Extract as an Antidiabetic. —Dr. R. Weil, of Berlin, claims to have obtained excellent results in three cases of diabetes by the administration of pills each containing 12 centigrammes [2 grains] of myrtle extract (corresponding to 1 gramme [15 grains] of the dry leaves). The patients took at first three of these pills daily; then every three days the daily dose was increased by three pills, until as many as fifteen were being taken a day, in three installments. The latter dose, which is reported always to have been well borne, sufficed to cause the glycosuria to completely disappear in two of the patients in three months; in the third case, the quantity of sugar in the urine, which when the treatment was begun was 3.12 per cent., fell to 0.14 per cent. under the influence of the treatment.

It should be added that the patients were subjected to a mitigated antidiabetic regimen.—*Merck's Bulletin*, December, 1892.

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Original Articles.

PSEUDO-MEMBRANOUS ENTERITIS.

BY T. H. HAY M.D.

My first introduction to this condition was had about one year ago, when, despairing of finding a logical cause for the many pelvic disturbances of a hystero-neurasthenic, I decided to examine the intestinal discharges for evidences of tape-worm. The first sample obtained presented the appearance of a section of tape which had undergone considerable softening. It was about twelve inches long, half an inch wide, and an eighth of an inch thick. Microscopically it proved to be composed of firm mucus filled with leucocytes. Examination of several samples showed the discharge to be constant in character, but no evidence of tape-worm was found. A portion of the discharge was given to Dr. Tower, who reported it to be a pseudo-membrane with numerous leucocytes imbedded in it. Reference to works on general medicine proved very unsatisfactory until Osler's Practice gave me a cue under the title of "Mucous Colitis." Two other articles only of any value are to be found in works of a general character—one by Wales in Pepper's System of Medicine, and one by Edwards in the Cyclopædia of Diseases of Children. An article by Woodward in the Medical and Surgical History of the War of the Rebellion is replete with references, and gives an excellent history and description of the disease. The rest of the literature of the subject is to be found mostly in scattered articles in the various medical journals.

It has been claimed that Aretacus described the condition in the second century, but Woodward asserts that Fernelius was the first to distinguish the disease, in his work on Pathology published in 1554, when he referred to the passage of inspissated mucus (*pituita concreta pituita lenta*). The first systematic description and proper classification of the disease was by Powell, in 1818, as a "painful affection of the intestinal canal;" the second by Good, in his Study of Medicine, in 1822, under the heading, "Diarrhœa Tubularis (Tubular Looseness)." Since then it has been variously referred to as membranous enteritis, pellicular enteritis, pellicular colitis, mucous colitis, chronic catarrhal diarrhœa, paraplexia rheumatism, colica pituitosa, chronic pellicular or eruptive inflammation of the mucous membrane of the intestine (Simpson), membranous enter-colitis (Muhlenberg), and a membrane-like affection of the bowels (Goss).

Until the time of Powell, on accouut of its occasional tubular form and lancinated appearance, it was generally mistaken for a discharge of the mucous membrane of the bowel. The same mistake was made about five years ago by a physician in this city, who informed his patient that she was "passing the mucous coating of her bowels," and until I saw the case she continued to think so.

Concerning the causes of the disease, there is very little known. Three facts are established: *First*, the condition is presented more frequently among women. Wales states that an analysis of one hundred cases gave only four males, two of which were children. The most complete summary of all cases reported shows about 80 per cent. of them to be female. *Second*, children are rarely affected. Edwards investigated one hundred and eleven cases, and found only six under 10 years. The four cases under my own observation occurred between the ages of 25 and 40. *Third*, by far the greater percentage of cases occur in women of a nervous character. My own were all of the hysterical or neurasthenic types. Especial reference has been made to the large proportion of the women having light flaxen hair, fair complexions, and white skins.

Climate, improper food, the excessive use of cathartics, mercury, severe hemorrhoids, have all been credited with causative influ-

ence. Edwards states that "We definitely know that climate, occupation, and inheritance are not to be considered predisposing causes." One of my own cases very strongly suggested the influence of climatic change. This patient, while residing in Milwaukee about six years ago, had frequent discharges of a ribbon-like character, but on removing to an inland town the discharges totally ceased. Early in 1892 she returned, and after the lapse of two months she presented samples of the discharge.

In regard to the pathology of the affection, nothing is definitely known. Writers early in this century believed it to be croupous or diphtheritic in character. Powell and Good supposed the exudation was fibrinous and similar to the "fibrous exudation thrown forth from the trachea in croup." Many of the latest writers hold that it is produced by a low-grade chronic inflammation of the mucous membrane. DaCosta and Wales doubt its primary inflammatory character, and consider it secondary to "changes in the nerves which preside over secretion and nutrition in the abdominal viscera." Osler, in the latest reference to the subject, says "it is due to a derangement of the mucous glands of the colon, the nature of which is quite unknown." Edwards expresses simply the opinion "that if inflammation is present at all, it is in a very mild form."

The colon and rectum are the portions of intestine most frequently involved. Only a small portion of the mucous membrane may be involved, but the great quantities of membranous material discharged in some cases (measured by yards in length, or "a chamber-vesselful") would indicate the involvement of a considerable surface. There are not a half-dozen post-mortem records to be found, and the two or three recorded throw no light on the morbid changes which occur. The endoscope has been used by Wales and Osler successfully. Wales records a "mucous membrane of a red, varying into a scarlet, color, thickened and denuded of epithelium in patches of varying extent." Osler says he found the membrane "closely adherent to the mucosa of the colon, but capable of separation without any lesion of the surface."

The exudation presents itself in a variety of forms, from jelly-like masses to tubular casts of considerable size. It may be shreddy or in form a thin fluid, ribbon-like and occasionally sectioned off, presenting the appearance of a tape-worm. The color may be white, gray, yellow, stained with bile-coloring or with blood. Microscopically the specimens present a structureless basement membrane, mucus, leucocytes, epithelial cells, and *débris*.

Numerous chemical examinations of the discharge show it to be completely soluble in caustic potash, partly so in aq. ammoniæ, insoluble in acetic, cold nitric, or hydrochloric acid, soluble in boiling nitric or cold sulphuric acid. Careful tests for fibrin failed to show any, and only a slight amount of albumin was found. It has been satisfactorily demonstrated that the chief constituent of the membrane is mucin.

This disease is much more frequent than the silence or indifference of works on general medicine might lead one to suppose, and we have all perhaps had greater or less opportunities to observe the disease. Effort should be made to decide whether the condition is primary or secondary in character. If secondary to the general nervous disturbances in hysteria or neurasthenia, then the problem is one for the neurologist; if a primary affection, then we have a sufficient material cause for the erratic vagaries of the hysterical imagination, and the indications for treatment of hysteria are unmistakable.

The characteristic symptoms of the disease are: The passage of shreddy, ribbon-like, flaky, or tubular exudates, either with an ordinary fæcal movement or without admixture of fæces, from the bowels. There is rarely any increased temperature, slight or no alteration of the pulse. The discharges are usually paroxysmal, recurring at intervals of a week, month, or perhaps a year; in some few recorded cases they have been continuous or daily. Marked digestive disturbances occur either before or after, or both, at the time of the paroxysm. There may be loss of appetite, and diarrhœa. From a day to a week before the discharge there may be abdominal pain ranging between a general sense of discomfort, and pain the most agonizing in character. This pain may be local or general in distribution,

One case complained of the sensation of a winding and unwinding spring in the right lumbar region, probably in the hepatic flexure. Within forty-eight hours following, the discharge would take place. Another suffered most excruciating pain scattered throughout the abdomen, which was followed by the evacuation. At the time of the discharge there may be considerable diarrhœa, the movements numbering from five to fifteen in twenty-four hours. Severe tenesmus is marked, with constant desire to go to stool, when there may be no movement at all or simply a discharge of the membranous material. During these paroxysms the abdomen is markedly sensitive to pressure, and there is great gastric disturbance, flatulence, and increase of the nervous accompaniments of the disease. Irritability and restlessness are increased, and marked mental depression amounting to melancholia in some cases may accompany the attack. Disturbances of vision and hearing may be present. One case complained of a horse, ridiculously dressed in gaudy clothes, dancing before her; another awoke to see herself being placed in a coffin, and could distinctly follow the proceedings to the grave, even to hearing the rattle of the earth upon the coffin. This patient possessed no permanent hallucinations. Neuralgias, localized, and anæsthesias or hyperæsthesias, are common, and I have seen one case of paraplegia. Genito-urinary complications are frequent. Dysuria and dysmenorrhœa (membranous in one of the cases) I have seen. The urine in a fair proportion of cases is altered in character, being light-colored, containing triple phosphate uric acid, epithelial cells, and mucus. Van Valzab reports skin eruptions, liability to herpes of the genitals, furuncles, carbuncles, and sore mouth. Emaciation is rarely marked, and has not been progressive in any case I have seen. None of these cases are good walkers; their locomotion seems to be characteristic of the disease, slow, deliberate, of the tight-rope variety.

W. A. Edwards reports one case which passed a membrane 14 inches in length, and continued to pass portions frequently for a year. This patient never experienced colic, tenesmus, or abdominal tumefaction, and there was never blood in the movements. Actual knowledge of the discharge was the only evidence of anything abnormal in her condition.

The chemical and microscopical examination of the discharge makes the diagnosis easy.

The prognosis as regards life is good—patients die *with* the disease, not *of* it. I have seen two cases of apparently spontaneous cure, and heard of one cured by change of climate and a course of some unknown quack preparation; but the majority of cases are chronic in character, and probably form a fair percentage of our female professional invalids of the hysterical type who infest sanitaria and worry the profession into an early grave.

Treatment so far has practically proven a total failure. The treatment of the paroxysmal pain may be accomplished by assisting the evacuation of the membrane by castor oil or senna with an alkali, or hot-water enemata, and the administration of opiates, of which codeine has afforded me the most satisfactory results.

The whole pharmacopœia has been ransacked for the treatment of the interval between the paroxysms. Good, in 1822, recommended the administration of small doses of mercury in blue pill or Plummer's, the bowels to be kept open by daily administration of sulphur, and the internal use of copaiba—per rectum if necessary. Since then, opium, belladonna, ergot, sulphate of iron, arsenic, the preparations of nux vomica, cubebs, pitch and tar, turpentine, iodides, bromide of potash, sulphate and arseniate of copper, cod-liver oil, pancreatin, application to the abdominal wall of blisters, tincture of iodine, and fomentations of hydrochloric acid, have all been tried without satisfaction.

The enemata have been legion. Sulphates of zinc and copper, nitrate of silver in increasing strengths, tr. iodine and carbolic acid (of which Wales speaks very highly) locally applied in strong solutions, bismuth, saponaria and taraxacum, tannic and gallic acids, have all been tried.

Removal of rectal pockets was tried in one case by a one-time surgeon in Milwaukee, without appreciable results. Electricity has been highly recommended, but has afforded me no satisfaction. My best results have

been obtained by good hygiene, generous diet, and iron, arsenic, and strychnia. Anæsthesia and hyperæsthesia are best treated by the faradic current; insomnia by some of the later hypnotics, of which I prefer chloralamide.

REFERENCES.—Good's Study of Medicine. Quain's Dictionary of Medicine. Reynolds' System of Medicine. Strümpel's Practice of Medicine. Copland's Dictionary of Medicine, vol. ii, p. 669. Cyclopædia of Diseases of Children, Keating. Reference Handbook of Medical Sciences. Pepper's System of Medicine. Ziemssen's Cyclopædia. Medical and Surgical History of the War, Part II, vol. i, p. 366. Osler's Practice of Medicine. American Journal of the Medical Sciences, October, 1871, p. 321; July, 1873, p. 106; January, 1875, p. 103; January, 1878, p. 146; April, 1888, p. 329. Boston Medical and Surgical Journal, 1855, p. 257; 1881, p. 507; 1885, p. 476; October, 1887. New York Medical Record, 1882, vol. xii, pp. 33 and 36. Medical and Surgical Reporter, 1880, p. 356.

Milwaukee, Wis.

ON ENDO-UTERINE TREATMENT.*

BY THOMAS MORE MADDEN, M.D., F.R.C.S.ED.†

In no respect is the contrast between the gynæcological practice of the present day and that in vogue when I began the special study of that branch of medicine (close upon a quarter of a century ago) more observable than in the certainty with which endo-uterine diseases—then beyond the possibility of either diagnosis or remedy—may now be accurately recognized and effectively dealt with. Nevertheless, several points of practical importance with regard to the scope and utility of various plans of intra-uterine treatment, the circumstances which call for their application, and the procedures by which they should be carried out, still remain matters of controversy, concerning which the verdict of professional opinion has yet to be pronounced. That judgment must obviously be based on the records of clinical observation. Nor can it be useless to our efforts at further progress if, in approaching this question, we should devote a few moments to reviewing what has been already accomplished, as a preliminary to discussing the methods by which new advancement may be made. Therefore, having on former occasions endeavored to contribute my mite to the improvement of this branch of gynæcology, in returning to the consideration of its present development I may here avail myself of some of my earlier notes and observations in elucidation of my more recent experience of intra-uterine therapeutics as applied to the so-called chronic inflammatory, congestive, or hyperæmic affections of the endo-uterine tissues, and reserving for a future opportunity some remarks on the value of such measures in the treatment of certain forms of uterine tumors and other morbid conditions of the womb.

The employment of remedies or chirurgical methods directly applied to the internal surface of the uterus is hardly quite so novel as is commonly supposed. Our return to long-disused or forgotten ancient ways in this, as well as in other practices in modern gynæcology, is well exemplified by the anticipation in the sixteenth and seventeenth centuries of methods of dilating the cervical canal, and applying escharotics to the endometrium, very similar to those re-discovered or re-introduced by Marion Sims, Kidd, Hagar, and others, amongst whom the name of Simpson, although earlier, stands pre-eminent. And the latter's suggestion of the employment of sponge-tents for the dilatation of the cervical canal, as well as of the uses of the uterine sound in cases of womb disease which were before regarded as "beyond the reach of any certain success of detection or possibility of removal," is still remembered by some of our senior colleagues as having been hailed as "the commencement of a new era in uterine surgery." It may, therefore, be of interest to recall the fact that, as I have elsewhere pointed out, an identical method for the same purpose was described nearly two hundred years previously. Thus, in that somewhat rare work, "The Method of Physic; containing the Causes, Signes, and Cures of Inward Diseases in Man's Body from the Head to the Foot. By Philip Barrow, Student in Physic and Astrology. Most humbly dedicated by the author to his singular good lord and master, Lord Burghley," the eighth edition of which was published in 1639, the writer, speaking of the

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treatment of contraction of the os uteri, says: "You must put a dry sponge that hath a cord hanged at it into the straight place to the extent to make it wider, which if it do fall out you must put in another that is thicker. Therefore you must have many and sundry dry sponges ready. . . . But yet you must alwaies put in sponges until the end of the cure, lest that the mouth of the womb do gather together againe."

In like manner, the application of escharotics and other remedies to the endometrium was unknown to gynæcologists of the last generation, the revival of which treatment in modern practice is mainly due to Ringland, Kidd, Atthill, and other teachers of the Dublin school, and was originally suggested in the long-neglected writings of a great French surgeon of the sixteenth century. Thus, in Ambrose Pare's treatise, "De Hominis Generatione" (1597), will be found not only an illustration of a uterine dilator for the rapid expansion of the orifice of the womb, but also a proposal for the destruction of intra-uterine growths by strong nitric acid:—"Ergo curandum verrucarum tria erunt velut sunna capita viniculum, sectio, et cauterium. . . . Ne aut repellulent instillabitur oleum de vitriolo, *aquæ fortis* sive chrysulca, aut capetelli ex qua cauteria potentiali concinnemus."*

Although, as just shown, endo-uterine exploration or treatment was thus recommended in what—especially by those unacquainted with the literature of that period—are now regarded as "the dark ages of medicine;" and although early in the present century ineffectual attempts were made at the resuscitation of these procedures—first by Dr. McIntosh of Edinburgh, and somewhat later by Dr. Blundell of London, who, on this as on many other gynæcological questions, was far in advance of any of his contemporaries — nevertheless, not much more than forty years since, when Simpson taught the use of sponge-tents and of the sound for intra-uterine exploration, the former had fallen into complete desuetude; whilst, as to intra-uterine medication, little, if anything, was practically known even twenty years ago, when I was assistant physician to the Rotunda Hospital, where the only endo-uterine treatment then employed in any of the gynæcological cases under our care in that institution was the introduction of a stick of nitrate, broken off and left in utero in some instances of menorrhagia, and which, as thus applied, without preliminary dilatation, was, as may be expected, more frequently followed by metritis or cellulitis than by the cure of the disease it was intended to relieve.

With regard to the more practical aspects of this subject—viz., the methods of modern intra-uterine treatment, and the conditions by which this is called for—whatever may be the value of the following observations, I may at least claim that they are founded on a somewhat large clinical experience in hospital and private practice. Thus, within the last fifteen years, upwards of ten thousand gynæcological patients have come under observation in the extern department or in the wards under my charge at the Mater Misericordiæ Hospital. And of the cases therein admitted during that period, in thirty-five per cent. intra-uterine exploration or treatment was found necessary; these cases included every form of gynæcological disease in which topical treatment might be resorted to when not otherwise specially contra-indicated by pregnancy, menstruation, or some interpelvic inflammatory condition.

Essentials of Endo-uterine Therapeutics.—There are two points essential, under all circumstances, for any effective intra-uterine treatment. In the first place, the orifice and cavity of the uterus, if not already sufficiently dilated, should be previously mechanically expanded for this purpose. Secondly, whatever application may be resorted to should be brought into direct contact with the diseased endo-uterine structures. These propositions will, perhaps, appear too self-evident to need any notice here; nevertheless, as any failure in intra-uterine medication arises, in nine out of ten cases, from this neglect, a few practical observations on these two points may not be superfluous in this connection.

Method of Rapid Dilatation of Os Uteri.—Until a recent period the only means available for opening the cervical canal and os uteri

*Ambrosii Parei. De Generatione Hominis. Caput lxii, Lib. I., p. 439. Folio Argentinæ. 1597.

for endo-uterine treatment was the use of comparatively slowly expanding tents, which whether in the forms of the older fashioned sponge-tents recommended by Simpson, or the laminaria or tubulo bougies and tents subsequently advocated by Sloan and others, effected their purpose at the cost of much time and pain, as well as of some risk from their employment. Nevertheless, such tents to the present day are extensively sold by the instrument-makers, and hence must be yet approved of by some practitioners. Why this should still be the case, seems difficult to understand, inasmuch as those antiquated methods may be now replaced by the more rapid and, as I believe, generally safer plan of immediate mechanical expansion by means of any of the various uterine dilators suggested by Hagar, Lawson Tait, and more recently and effectively by Duke and others. In this connection I may, however, venture to express a preference, in most instances, for the rapid cervical dilator which I myself designed, and which, from experience of its employment in many hundreds of cases in hospital and private practice, I have found a reliable means of speedily obtaining sufficient expansion of the os uteri for endo-uterine treatment.

Use of the Uterine Curette.—As already pointed out, no intra-uterine application can be of any avail unless it reaches the surface on which it is designed to act. The practical importance of this essential but often neglected factor in uterine therapeutics is more especially obvious in the closely allied instances of chronic corporeal endometritis and sub-involution, in both of which (and more especially the former) the lining mucous membrane of the womb is either overlaid by an impervious pseudo-membraneous albuminoid neoplasm, evolved from the proliferating cilia of the diseased surface, or else so thickly bathed in the tenacious morbid secretion therefrom as to effectually protect the underlying tissue from the action of any remedial agent introduced into the uterine cavity. It was therefore suggested by Dr. Atthill, several years ago, that, with the view of overcoming this difficulty, intra-uterine medication should be chiefly restricted to the period of denudation immediately after the menstrual epoch. The suggestion, although an excellent one in some instances, is by no means generally practicable, and would restrict intra-uterine therapeutics within extremely narrow limits. Nor does any gynæcologist, including, I am sure, my distinguished friend Dr. Atthill, now find it necessary to postpone uterine treatment merely to hit off the post-menstrual period, inasmuch as we may, in cases of endometritis or sub-involution, for instance, remove at any time the pseudo-membrane and secretions just referred to by the use of one or other of the many forms of uterine curettes, of which within the past few years so many varieties have been supplied by the ingenuity of Drs. Thomas, Emett, Duke, and others, and so at will bring our remedies into direct contact with the true intra-uterine surface.

Of curettes for endo-uterine use, the choice, as I have before observed, is now large; and probably every gynæcologist thinks the one he uses better than his neighbor's. From this weakness I cannot claim any special exemption, as for some years past I have chiefly confined myself to the use of the adjustable curette, or, as I prefer to call it, the uterine scoop, and which I devised with the view of obtaining greater power of manipulation within the uterine cavity, so as to insure the most thorough denudation of the parts to which it is applied. This instrument differs somewhat in principle, as well as in form and material, from Thomas' dull-wire and other American curettes generally employed, the scoop or blade being made of hard silver, somewhat larger as well as sharper, and capable of being set at any desired angle in utero by a screw adjustment in the handle, so as to more effectually scrape away the structures to be removed, and also by the consequent hæmorrhagic depletion thus caused relieve the vascular tension of the uterine tissues in cases of congestive hypertrophy.

Visual Examination in relation to Endo-uterine Therapeutics and Diagnosis.—In direct connection with endo-uterine therapeutics and the diagnosis of those morbid conditions of the endometrium that demand their application, and which either have their starting-point in lacerations and cervical lesions, or else the existence of which, though corporeal or fundal in their origin, is evinced by the

aspect of the vaginal portion of the uterus, I must here again refer to some previous observations which, *in extenso*, may be found in a communication "On Visual Examination in Gynæcology" in the last volume of the "Transactions of the Dublin Obstetrical Society." In that paper I pointed out the importance of sufficient illumination in the diagnosis and treatment of some of the diseases referred to, as well as the errors arising from the neglect of this consideration, and described the various means by which direct sunlight may be replaced for visual examination of these parts. There is, however, I remarked, still room for further improvement in this respect; and the difficulty of making a satisfactory visual examination of the vaginal portion of the uterus, which might throw light also on various forms of endo-uterine disease, still frequently presents itself even in the gynæcologist's consulting-room, where the couch is most advantageously placed with reference to light; and this trouble, as I may now repeat, is of course still more commonly met with in the patient's own chamber, where "the bed is often so situated as to preclude full access of natural light into the speculum. Nor is this deficiency supplied by any of the electric speculum-lamps that I have myself as yet employed, these being apt to fail us at the moment their aid is needed—as, owing to some one or other of the defects either in battery, connections, or lamp, that are of such continual occurrence in electric apparatus, on pressing the button, instead of the brilliant flood of light expected, the result obtained may be either *nil* or else merely the dull-red glow of the incandescent carbon filament. Whilst, on the other hand, if we content ourselves with the more reliable, if less elegant, 'bit of candle-end,' still recommended by some authorities for this purpose, the necessity of holding it so as to throw some light into the speculum must largely interfere with any manipulation required by the case."

I would, therefore, again suggest to other practitioners, who may meet with the difficulty referred to, a trial of the simple but efficient appliance made for this purpose, in accordance with my suggestion, by Messrs. Lynch, Aldersgate street, London, and which I have found useful and handy under such circumstances. This instrument is merely a very portable, many-jointed light-holder, capable of rotation in every direction, that can be instantly and securely affixed to any speculum so as not to be in the surgeon's way whilst affording reliable light for examination or operations in the vaginal portion of the uterus.

I may also observe that I have found Dr. Duke's cervical and flushing curettes of great value in intra-uterine treatment, the former of which is now generally adopted by our transatlantic brethren, and is especially useful in removing that viscid mucoid secretion by which the cervical canal is generally blocked in cases of endometritis, and so facilitating the application of remedies to the internal surface of the uterus; whilst the latter, or new flushing uterine curette, combining the functions of curette and irrigator, possesses obvious advantages in dealing with these cases.

In such cases the method of removing the uterine secretions by Playfair's probe armed with cotton wadding, or that material round the point of an ordinary speculum, as pictured in some very recent text-books, is equally absurd and antiquated. The best form of speculum forceps is that of Duke.

Uterine Irrigation with Hot Water.—The one endo-uterine remedy, the utility of which in every form of chronic inflammatory or congestive disease of the endometrium is universally acknowledged, is frequent and long-continued hot-water douching or irrigation, for the purpose of inducing contraction of the congested vessels and improving the local circulation. As to the method by which this intention may be carried out, there is, however, an unfortunate discrepancy between the actual practice commonly adopted and that which should be employed. Many years ago, in the "Transactions of the Dublin Obstetrical Society," I called attention to the dangers of uterine injections with the ordinary syphon syringe, exemplifying this by the clinical history of some cases then referred to, and at the same time exhibiting an irrigator which I suggested as a substitute for the ordinary syringe in all cases, and which I still think possesses the advantages of greater sim-

plicity of form, convenience, and facility in its employment, and efficiency in its action, over instruments of a similar kind. This irrigator, having been since appropriated or copied by others without any acknowledgment, has very recently, with my consent, been reproduced in a more elegant and somewhat better form by Messrs. Arnold & Sons, London, as well as by Messrs. Corcoran of Dublin, and Weiss of London and Manchester. Therefore its uses may be here briefly referred to, inasmuch as, notwithstanding the several dangers and inconveniences connected with the employment of the ordinary syringe, especially when used for intra-uterine purposes—such, for instance, as the injection of air, or the production of metro-peritonitis from undue force, as well as the risk of thus driving the injected fluid through a patulous fallopian tube into the peritoneal cavity, or through the dilated uterine sinuses, in recent cases of sub-involution, into the circulation, and so causing sudden death from embolism (of which two recent instances are recorded in the Occidental Medical Times for January, 1891)—the syringe still holds a place in the gynæcological armamentarium. Moreover, to the present day, that instrument is still regarded as an almost indispensable adjunct in the treatment of nearly all the diseases peculiar to women *et quibusdam aliis*, and is employed by them without any special caution or apprehension of possible mischief therefrom.

Without further reference, however, to the dangers that may attend the use of the syringe, its complete inefficacy in the treatment of endometritis should also be borne in view. In such cases, to produce any permanently beneficial effect from the local application to the endometrium of hot water, it is obvious that this must be kept in contact with the congested surface for a considerable time, and be applied with uniform force and at a uniform temperature on each occasion. None of these intentions can possibly be carried out by the patient with an ordinary syringe, whilst all of them may be obtained by the employment of an irrigator such as that to which I have referred, by which a gentle, continuous stream of water may be readily conducted, at any desired temperature, and for any required time, into the uterine cavity.

Endo-uterine Treatment in Congestive Hypertrophy of the Womb.—The majority of cases in which topical applications to the lining membrane of this organ may be called for are instances of congestive hypertrophy ending in areolar hyperplasia, or, as it was formerly called, chronic inflammation of its structures, or endometritis. Whether inflammation had really anything to do with the morbid conditions now referred to or not, is a question which was long debated, and which, as far as our present purpose is concerned, may be regarded as affecting names rather than facts. It matters practically very little which of these or other suggested terms be employed by pathologists, provided only that it be one not liable to mislead the practitioner as to the necessity for that topical treatment the importance of which in these cases is now generally recognized. I have already alluded to the improved methods of local exploration at present available for the recognition of these conditions, the existence of which could formerly only be inferred from concurrence of various symptoms, many of which may be also present under other circumstances. Of the symptoms thus relied on, the most constant are a sense of uterine fullness, obscure pelvic discomfort or pain, and displacements, particularly retroversion or retroflexion, from the weight of the congested or hypertrophied fundus. Besides, there is generally menorrhagia, or dysmenorrhœa, or both, as well as uterine leucorrhœa. Lastly, in this connection, must be mentioned the various constitutional sympathetic disorders of the general health, and more especially those manifestations of hysteria and other reflex cerebro-nervous disturbances which are so intimately associated with all uterine disease.

Sub-involution.—What has been just said with regard to endometritis is equally applicable to the next most frequent disease in which intra-uterine treatment is required—viz., sub-involution of the uterus, as the latter cannot exist without the former; and hence the several methods of topical treatment available in both these complaints may be included together in the following summary of my clinical experience of intra-uterine

therapeutics. In this I shall refer, firstly, to the management of those more common instances in which we have to deal with the milder forms of corporeal endometritis and sub-involution in which the disease is comparatively recent and has not progressed to the graver pathological changes which will be subsequently alluded to as consequent on the neglect and extension of this condition; and, secondly, we may consider the more active treatment required in the latter cases.

Iodine and Tanno-terebinth.—Of the many topical methods I have tried in the treatment of congestive hypertrophy which is generally associated with sub-involution of the uterus, I have obtained the most satisfactory results from the free application to the endo-uterine surface of a strong solution of iodine in glycerin of carbolic acid, which in some instances of chronic sub-involution may be followed by the introduction of a small tampon soaked in a saturated solution or mixture of tannic acid and rectified turpentine. This preparation, which, for lack of a better name, may be described as tanno-terebinth, has been prepared for me by Messrs. Hamilton and Long, to whom I am indebted for the time and trouble they have given to carry out my suggestion; as may be seen from the specimen here shown, it forms a creamy, oleaginous fluid, which, when employed in the manner referred to, and left in utero, acts as a powerful local astringent on the congested endo-uterine membrane, rapidly relieving the local vascular tension; and, secondly, as a foreign body, it excites muscular contraction of the uterus, and thus generally insures its expulsion within twenty-four hours from that organ. I know of no means by which, in suitable cases, an engorged and dilated uterus may be more speedily restored to some approach to its normal condition than this. And hence, although obviously unsuitable in all cases where any active congestion or inflammatory action is present, I would recommend a trial of this agent in otherwise appropriate instances of the kind above referred to. I need hardly repeat that to use this application safely the os must be thoroughly dilated; the size of the tampon must be proportionate to that of the uterine cavity, and it must be so secured by a ligature as to be easily withdrawn should any symptoms supervene rendering this necessary.

The Glycerin Tampon, for which as a cervical application we were indebted to the late Dr. Marion Sims, still holds its place in the cases now under consideration as one of the most efficient means of relieving the vascular congestion, not only of the cervix, but of the endo-uterine tissues, the profuse serous exudation thus produced on the lower segment of the uterus to a large extent extending upwards to the contiguous structures, and in some cases of corporeal endometritis, thus affording curative results which cannot be so readily obtained by any other method. At the same time the action of glycerin in this way is not devoid of objections. In the first place, it is messy and incommodious to the practitioner, who has to prepare and introduce the saturated tampon; and secondly, the profuse watery discharge following its introduction is a source of discomfort often much complained of by the patient, and when long persevered in, as must frequently be the case, is apt to produce troublesome excoriations of the external parts—more especially if the glycerin be not of the purest quality.

Boric Acid.—For the foregoing reasons I now comparatively seldom resort to the glycerin tampon, finding that I can obtain very similar benefit, without those disadvantages, by the dry boric-acid treatment advocated by Dr. Duke. Adopting his recommendation, I have employed this agent by his insufflator and tube as an endo-uterine application in a considerable number of instances of congestive hypertrophy or sub-involution, and, so far, have found that in most instances it possesses the advantages claimed, being asceptic, cleanly, and facile in use, whilst efficient as a powerful local astringent, and also in a minor degree producing serous exudation and thus depleting the hyperæmic uterus.

I shall not occupy time by any reference here to massage, electricity, or any of the numerous other methods that have been recommended in the treatment of the cases under consideration. Inasmuch as I have from time to time made trial of most of these, including the two former, and found

they did not fulfill the promises held out by their advocates, I have ceased to employ them.

Nitric Acid and other Endo-uterine Escharotics.—The foregoing methods, however useful in the ordinary cases of corporeal endometritis or congested hypertrophy—of which, as before observed, the most common exemplification is met with in connection with sub-involution of the uterus,—are, unfortunately, generally ineffectual in the treatment of some of the graver forms of so-called chronic endometritis. In such cases of long-standing local hyperæmia the lining membrane and submucous tissues of the uterus are disintegrated and altered by the erosion of the mucous membrane and destruction of the normal ciliated epithelium, and the consequent pathological changes in the uterine structures which have been well described by Professor Palmer, of Cincinnati, in his able monogram "On the Inflammatory Affections of the Uterus." In these cases, as Dr. Palmer points out, the mucous membrane thus disintegrated is replaced by polymorphous cells, with a pavement-like epithelium. The whole membrane, the utricular glands included, becomes atrophied; a layer of connective tissue lines the cavity, covered only perhaps by polymorphous cells; or the membrane, within which are minute cysts of degenerated glands, may be transformed into a callous structure of varying thickness. Before undergoing general atrophy, however, these glands commonly take on cystic degeneration from localized atrophy of their orifices, and then present the appearance of rounded hemispherical projections, or pedunculated tumors varying in size from a pin-head to a large pea, elastic to touch and with transparent contents. These glands may likewise be greatly hypertrophied—cystic or glandular polypi. Associated with the above conditions are the so-called vegetations, granulations, or fungosities. They resemble somewhat papillary epithelioma, and may degenerate the membrane into that condition. Also, there may be detected pit-like expressions and elevations formed by the rupture and falling-out of the glands.*

It is obvious that under such circumstances the methods of treatment already described as generally sufficient in ordinary cases of congestive hypertrophy and sub-involution of the uterus would be wholly inadequate, and must be replaced by more active measures, amongst which the thorough removal, as far as possible, of the diseased structures by the curette holds a primary place. This procedure should, moreover, be then supplemented by the use of remedies by which not only the disorganized surface, but also the deeper-lying implicated uterine tissues, may be reached. Of these, unquestionably the most potent, but unfortunately the least manageable, is the actual cautery; and in my own practice I have now tried every form of cautery that can be thus applied to the endo-uterine surface, including the old-fashioned cautery iron, the thermo- and electro-cautery, and, having found it impossible to either reach all the diseased structures or to restrict the action of the cautery to these, have been obliged to discard their intra-uterine employment. In this connection I may, however, observe that the actual cautery, when applied to the external or vaginal surface of a congested cervix in the form of *igni-puncture*, will not only be found in many instances of great local benefit, but may also prove of much larger utility than is generally known in the way of reducing the corporeal and fundal vascularity and hypertrophy of a chronically congested and enlarged uterus in some cases. Next in power, and far before the actual cautery in practicability for intra-uterine purposes, is the potential cautery, or, in other words, any of the strong acids that may be thus used as escharotics. Of the latter the most efficient in suitable cases, and with due precaution the most manageable, is fuming nitric acid, the advantages of which in this way were familiarized by the teaching of Dr. Kidd, Dr. Atthill, and other gynæcologists of the Dublin school before they were elsewhere known. In the use of this or in any of the other escharotics, such as chromic or sulphuric acid, the acid nitrate of mercury, etc., which may be occasionally substituted for the nitric acid for endo-uterine application, it is, of course, equally necessary that the cervical canal and os uterum should be thoroughly dilated, that

* *Vide* "System of Gynæcology by American Authors." 1880. Vol. i, p. 570.

the posterior vaginal wall be well protected by the duckbill speculum, and the uterus drawn down as nearly as possible to the vulva by the volsellum, so that its cavity may be effectually swabbed out by the escharotic. In this way the whole charge of acid may be expended on the affected surface without much risk of injuring the vaginal walls or external parts, which, however, should be well anointed with vaselin beforehand. Immediately after the application the uterus and vagina should be washed out with an alkaline solution (and common soap and water is as good as any that can be employed for the purpose), and, if pain be complained of, a morphia suppository introduced. When thus used, nitric acid may generally be safely employed in those cases of intra-uterine disease in which its application is necessary, and to which, I need hardly add, its use should be restricted.

I have only, in conclusion, to add that, whilst fully recognizing as I do the great importance of the methods of intra-uterine therapeutics just referred to, I cannot, at the same time, refrain from again observing that at the present day there is unquestionably a general tendency to rely too exclusively on topical treatment in all uterine diseases. I have elsewhere discussed the constitutional relations of various chronic intra-uterine disorders, more especially as seen in patients of strumous or gouty diathesis, and would once more urge the necessity of conjoining appropriate constitutional treatment with whatever intra-uterine medication may be required in any case that comes before us in gynæcological practice.

RAILWAY SPINE.

A CLINIC BY DR. F. X. DERCUM.*

I propose to show you a number of cases which are of exceedingly great interest, inasmuch as they are frequently the subject of dispute in the courts, and very often physicians are arrayed upon rival sides. I allude to the subject of railway spine. Railway spine is regarded by very many people as synonymous with fraud. I think, however, that you will be convinced before the hour is over that in these cases we have certain tangible symptoms which are incapable of simulation. Remember that when a man is hurt in a railway collision he is almost always in the position of a litigant. However, in the cases I will show you, questions of litigation are not at issue, and the cases are of exceedingly great value on that account.

Two sets of symptoms are present—motor and sensory. The patient complains almost always of pain. Now, pain is a subjective symptom. A man tells us that he has pain; how can we verify this statement? To do this is exceedingly important. It may be that the motor symptoms, if present, are very slight, yet the pain complained of is very great. How shall we decide this question of pain? Before I go into the details of the case before us, let me use it in the way of general illustration. The average patient complains, among other things, of pain in his back. If the back be examined by palpation, we often find that our patients shrink in a manner suggesting that the back is extremely hyperæsthetic. Indeed, hyperæsthesia is present in a large number of these cases. Thus the patient may shrink when the finger is passed lightly down the spine, or the back is gently handled. The first test, then, is the one by palpation, or "*superficial pressure*" as I have termed it. General hyperæsthesia of the back may be a purely hysterical symptom, or it may be possible even to simulate it. More frequently it is genuine. Occasionally, in passing the finger lightly down the spine a tender spot about the size of a silver quarter or half-dollar is discovered, resembling very closely similar spots found in so-called spinal irritation or spinal anæmia. No change whatever in physical appearances marks such a spot, and yet if a solution of cocaine be injected into it the pain disappears, showing, I believe, that it is not a subjective symptom. The pain elicited upon "*deep pressure*" is different both in character and significance. In the first place, it is not as a rule limited to a small area, but is diffused. It is generally elicited at one or two levels of the spine. By pressing with the palmar surface of the thumb persistently over the spine and muscles to either side, the pain is induced. We infer from this that there is soreness in the deep

*Delivered at the Philadelphia Hospital.

tissues of the back. Again, if the back be painful, it is reasonable to suppose that dorsal movement will give rise to complaint of pain by the patient; we therefore next perform the various tests which I have called the tests by "*voluntary motion*," the tests by "*forcible motion*," and the tests by "*transmitted shock*." In the first place, regarding the tests by voluntary motion, we will find that if we ask one of these patients to bend the back he will usually make but a feeble attempt to do so, complaining that it gives him pain. The pain is usually referred to some one or more areas of the back. Instead of voluntary, forcible flexion may be made. By this means pain may also be elicited, and the test has the advantage of not suggesting to the patient the symptom that is being sought for. In addition to the test by forcible flexion, the back of the patient may be jarred and thus pain if present be revealed; that is, the patient standing or sitting, an impulse may be sent down the spinal column from the top of the head or from the shoulders. It is exceedingly probable that where pain is elicited by these tests we have an injury of the ligaments and muscular structures of the back to deal with. Curiously enough, too, in cases in which the back has been injured we are apt to find that the muscles spring out in spasm so as to become unusually hard and prominent. This is a symptom which it is impossible to simulate. In some of these cases you will see, associated with the muscular spasm, also a tremor, and a certain condition of the reflexes which I shall detail

I will briefly read the history of the man before you. (*Case 1.*) Age, 42; occupation, builder; in June, 1890, while erecting a barn, was struck by a large rafter in middle of his back, knocking him down and pinning him to the earth. He was unconscious for a few minutes, and sick at the stomach; vomited repeatedly during the next four days, the vomit occasionally containing blood. During this time he was not confined to the house, but continued outside directing the men at work. It is exceedingly interesting to note here that the maximum onset of symptoms was not immediate. He tells us that during these four or five days, during which he continued to direct his men at work, he felt giddy, and was afraid to climb to a height; his back, too, felt quite sore. A week later he complained of a headache which was daily growing more intense, and soreness had spread all along the spine. At first he had soreness in the dorsal region, where he had been struck, and from this point it spread up and down. Pressure on the spine caused sickness at the stomach. (This, too, is an important symptom.) He was unable to collect his thoughts, and could not concentrate his attention upon anything; slept badly at night, and was very restless and delirious. These statements come from his physician.

Now, this accident occurred in June, 1890. He was examined at the University Hospital in December of the same year. He had excessive spasms and tremor of all the muscles of the back, but especially at the seat of the injury, and also pain on motion in every direction. The knee-jerk was exaggerated, and there was occasional flushing of the face. Mentally the man did not seem much depressed. He was then placed on the rest cure, and kept in bed for a long period, after which he improved so much as to be again able to undertake work. While attempting to assist his men he again fell and again struck his back, causing a repetition of all the former symptoms, vastly exaggerated. Notice the marked tremor which this man presents—a tremor which affects not only the truncal muscles, but also those of the arms and legs. As he holds up his hands you notice that they are livid and bluish, and when I touch them I find that they are quite cold. You see what a marked condition of vaso-motor paralysis is present. When I press upon the hand, a white spot is produced, and the vessels fill very slowly. We will ask him to rise; you see he does so slowly and with difficulty, and for two reasons: first, because he is weak and cannot get up quickly; and in the second place, because it gives him pain to move. As he stands there, you notice that he trembles like a man with a chill. If any of you will step down and touch these muscles, you will find they are hard and knotted—certainly a condition which is not, and cannot be, simulated. [N. B.—The patient is stripped.] If you are careful

in your observation, you will notice as you touch this man and see how hard his muscles are, your hands grow moist, because, although the room is quite cool, he is sweating profusely. So much for your observations in merely looking at the case. You notice I elicit pain [the man flinches] in passing my finger over the spine, thus making "superficial pressure." Now see if I can also elicit pain in making "deep pressure" and over the muscles. You see I am pressing to either side of the spinal column, and [the man flinches and cries out]— This pain is not the pain of superficial pressure, but is due to muscular soreness. I will ask him to bend forward. This is the test of "forward flexion," and you see as he bends forward the group which constitute the erector spinæ muscles are in more violent spasm than before. The exertion also causes him to perspire more freely, and to complain of pain.

The test by "torsion" is performed by grasping the hips, and forcibly rotating the shoulders one way or the other. If a man comes to you with the statement that he has pain in the back, and you fail to confirm his statement by pressure or palpation and by the flexions, it is your further duty, before you decide against the man, to try the following test: Rotate the trunk forcibly by the shoulders, an assistant firmly grasping and fixing the hips. In a normal individual no pain is produced. If injury to muscles, ligaments, or joints be present, the patient may respond excessively. If you want to confirm your observations, or if you want to determine whether certain other structures have been injured, it is your duty to test the patient by "transmitted shock." This is performed in two ways. In the first place, the patient standing in an erect position, you press your hands upon his hips and press forcibly downward. If the cartilages are involved or have been damaged, or if the small joints formed by the articular processes of the vertebræ have been injured, this test elicits pain. I want to caution you to be careful in the amount of force you use in practicing this transmitted shock, because you can cause exquisite suffering which will last for several days.

Let us see, now, what we can infer from the case before us. The man's back has been struck a severe blow, and, from the fact that there is pain upon pressure, upon flexion, and upon torsion, we have the right to say that the spine has been sprained, or, to use a more homely word, wrenched; this is the condition which we find in a vast number of railway cases. This wrench involves ligaments and muscles of the spinal column and back. You may argue the spine is very elastic; the spine as you see it in the museum jar, separated from the ribs and all its supporting and environing ligaments and muscles, is exceedingly flexible, but the spine in a living human being is not in that condition. The man who is erect has all the muscles of the back in a state of tension; these muscles are just as tense as the strings of a violin, and almost as sensitive to injuries. The tension varies, it is true, continually with every change of position, but is nevertheless constantly present.

We have thus far made out, I think, without any fear of contradiction, that we have a sprained back to deal with; but that is not all, by any means.

Those of you who have attended nervous clinics will remember that we frequently have patients in whom the symptoms of a shock following an accident are very pronounced and persistent, and deepen from day to day. These symptoms of shock—that is, chronic shock, as the older surgeons called it—are present in almost all the cases. We call this condition at the present day traumatic neurasthenia.

The man is exceedingly weak and tremulous. There is a short, sharp knee-jerk, which is an exaggerated knee-jerk, decidedly different from that which we have in health. An ankle clonus is also present. It is hardly necessary for me to explain the significance of the knee-jerk and an ankle clonus in such a case. They are merely facts in keeping with the general motor erethism present, just as the spasms in the back and the violent tremors are evidences of great motor excitement.

We have in this case, then, a number of associated symptoms, motor and sensory, which we know are not simulated, especially as the man has everything to lose and nothing to gain by being sick.

This man's pulse is very rapid; now it is

something over a hundred. As a rule these patients present a very rapid pulse; also dilated or excessively mobile pupils. The patients who suffer from traumatic anæsthesia present also a number of subjective symptoms. Thus, this man tells us that at first he was giddy and that he had headache; that he had nausea which was quite persistent; also that he had ringing in the ears. Curiously enough, too, the sleep of these patients is very much disturbed. They are apt to dream of the accident over and over again, and to wake up suddenly at night as though badly frightened.

It is important that these cases be observed for a long time. This man was injured first in June, 1890, then after a long period of rest he was again hurt, the second time comparatively slightly but with an exacerbation of all the old symptoms. It is almost a year and a half since the accident, and yet see the very marked condition of the symptoms.

I will show you another case somewhat similar to this, in that the symptoms have become chronic.. With regard to the ringing in the ears, vertigo, and headache, they are very persistent symptoms.

Case 2.—This man presents also an interesting history and a very instructive one. He lost twenty pounds after his accident. It is difficult, as a rule, to verify the loss of weight, because you have to depend upon the statement of the patient as regards weight before the accident.

In December, 1890, this man was sitting on the railing of the South Street Bridge, when his hat blew off, and in attempting to catch it he lost his balance and fell over. Was unconscious until he found himself in the University Hospital, to which he was removed the same day. When first seen by me he had pain in the lower dorsal and upper lumbar region, and here deep pressure elicited great soreness. He walked about for a week after the accident. Marked pain was also elicited by flexion. He was at once placed in bed on the rest cure, and was kept on liquid diet; massage was used, but his back remained very painful, so in order to secure absolute rest a plaster-of-paris jacket was used, which was removed after six weeks, and massage was again instituted. He got slightly better, left the hospital, and, in visiting some friends, walked farther than his strength justified, got worse, and came back to the hospital in the condition in which you see him now. He has remained constantly in bed since. He lies almost continuously in one position—that is, upon his side, with feet and legs drawn up. Extreme sweating is a marked feature in his case; it is present in the majority of railway spine cases, but not to this extreme extent. He also presents, in addition to the sweating, other symptoms of general shock. Notice with what difficulty he moves—he cannot move his legs to any extent without causing him pain in the back. The muscles of the back are quite hard and rigid; they are in a state of tremor, which, as you see, radiates to the muscles of the shoulders and also to the other muscles of the extremities. If I press upon his back, using deep pressure with considerable force, he reacts, as you see, very markedly. In addition to these symptoms, he also presents a reflex similar to that already seen, a short and sharp knee-jerk.

In these two cases you see a condition which you will see in a great many others to a less marked degree. It is very persistent and essentially chronic.

Case 3.—Here we have a third case, a man who has a history of having fallen down stairs, striking upon the back of the neck, head, and shoulders. He was confined at home in bed for four weeks, then came to the hospital, where he was nine weeks more in bed. He had pain and great weakness in legs and arms for six weeks, especially in the right hip. As in the preceding cases, the symptoms attained their maximum only after a time. After fourteen weeks in the hospital, he was able to work for a few weeks. In May, 1891, he came back to the wards, complaining of increased pain in the right hip.

This man presents somewhat the symptoms of these other two men, but not so marked. This is one of the cases which has much improved under treatment. He still has some traces of the old muscular wrench. Some months ago, when I examined this man in the wards, the examination gave rise to severe spasms of the muscles; this, however, has entirely disappeared. It is also exceedingly probable that there was in his

case also some concussion of the cord and spinal nerves.

This man presents a further symptom, which I will not take time to go into; he has a marked atrophy of the gluteus maximus of the right side, associated evidently with the injury to the right hip. This atrophy is probably the result of a direct blow to the muscle. The case is comparable to the instances of deltoid palsy from falls, seen so frequently.

In this man's case the pain is limited to the parts where he was struck—that is, he has pain in the cervical spine, the upper part of the back, and the right hip. The pain is readily elicited both by motion and by transmitted shock. Though doubtless improved, he is far from well.

REPORT OF CLINICAL EXPERIENCE WITH FLUID EXTRACT PICHI (FABIANA IMBRICATA).

BY P. ROGAY, M.D.

I have recently treated with fluid extract pichi eleven cases of cystitis, enlargement of the prostate, frequent and painful micturition with scanty urine, and very scalding micturition followed by blood. I used from 10- to 20-drop doses, according to the case, every three or four hours. All the cases were thus cured in from twenty-four to sixty hours. One single case relapsed after twenty days; here is its history:

Mr. V. D——, bachelor; 30 years old; native of North Carolina. He said that when he was young his father was in the habit of taking much turpentine, and without reason or motive he often gave to him from half a teaspoonful to a teaspoonful. When he was about fourteen years old he began to have scalding urine, sometimes with much blood. An old woman gave him infusion of green coffee, but the complaint returned at regular intervals. He had periods of fever, and on one of these occasions some physician administered castor oil with a few drops of turpentine; this immediately brought back the complaint, with worse pains and more blood. Since then he has always, when applying for aid, begged his doctor not to give him turpentine. He said the "spells" returned within an hour when he had accidentally inhaled turpentine vapors from fresh paint. For the past year he has not taken any green coffee. As pichi leaves are terebenthinate, I hesitated to use them in this case, but finally gave him half an ounce of fluid extract, prescribing 10 drops every four hours, to be discontinued if ill results followed. He came back in three days, and shortly afterwards reported himself cured. There were two drachms left in the bottle. About twenty days afterward, while he was riding with a friend, a vial of turpentine which the latter had bought was accidentally broken. V. D. suffered a return of his old complaint before he reached home, late in the evening. Next morning he came to my office, experiencing much pain in getting out of the wagon. This time he had a very large epididymitis. I put him on 20-drop doses of fl. ext. pichi, with emollient poultices. Two days later he was all right, though I made him take 10 drops three times a day for one week. That was 3½ months ago; he has had no return of the trouble since.

Mrs. W——; age, 40; married; for nine months had constantly scalding urine, with frequent desire to evacuate the bladder, but with little success, and often only blood passed. She was unable to attend to her housework, had no appetite, and was out of spirits. For six months she followed the prescription of a young M.D., without improvement. She sent her husband to ask her doctor if he thought he could cure her; his answer was that he didn't believe he could, nor could any one else either, as she had Bright's disease. Half-scared to death, her husband brought her to my office. I put her on 20 drops fluid extract pichi every three hours. On the second day she passed water like a healthy woman. She continued the pichi two days longer, but objected to its bitterness. A few days afterward she resumed housework. This was last July; she has gained 20 pounds since, and has not had any return of the old symptoms.

Mr. D——, 48 years old; married; for several years past has been troubled with enlargement of the prostate, and had to take 10 grains of muriate of ammonia three times a day, nearly all the time, to help him to pass water. He took 20 drops fluid ex-

tract picht three times a day for three days, left off the muriate of ammonia, and is all right since.

My other cases were fresh cases, and were relieved immediately.

Three miles north of Bell's, Texas,
Nov. 16, 1892.

A NEW FIELD FOR THE YOUNG PHYSICIAN.

In an excellent article on "Chronic Rheumatic Joint Affections,"* Prof. Max Schueller, of Berlin, discusses their treatment from a medical and surgical standpoint. For those cases which have come to be opprobria medicorum, and travel from one physician to the other, only to become a prey for the quack and at last to eke out a miserable existence, Prof. Schueller gives a more hopeful outlook. Among the remedies applied by him, massage and baths are highly commended. With regard to the former he says: "The art of massage is not to be despised by the young physician."

Massage was used often by Prof. Schueller in such cases as were free from pain and subacute inflammation. In the majority of cases it was combined with baths. The massage is intended to affect not only the joint, but, what is of great importance, the muscles connected therewith, and on their strengthening and restoration great stress is to be laid. A direct influence can be exerted on the joint itself by massage, especially in simple thickening of the capsule, contractions, and tuft formations. On the other hand, it can work an appreciable change in the condition of veritable ankylosis and extensive development of tufts. In these, massage of the muscular apparatus is also productive of the greatest good, often restoring some degree of motion and usefulness of the joint. The influence of massage upon the tissue change and general condition of such patients as have lost the power of motion, is considerable. It must be executed by the physician himself, and not by those mechanical, unintelligent masseurs who often have not the slightest knowledge of the case and handle their victims in a most senseless way. The permanent surgical and therapeutic effect gained by scientific massage is very great.

* Langenbeck's Archives (Dietetic Gazette).

Correspondence.

NEWS FROM NEW YORK.

[Special Correspondence.]

Professor W. T. Lusk performed a symphysiotomy on a patient at the Emergency Hospital a few days ago. The woman had been in labor thirty hours when brought to the hospital, and an attempt had been made by an outside physician to deliver the child with forceps, which resulted in severe lacerations of the cervix uteri and vagina. The degree of pelvic contraction was found to be such that the child could not be delivered without an operation. As the condition of the mother would not permit of the severe mutilation necessitated by a Cæsarean section, the choice lay between craniotomy and symphysiotomy; the latter operation was chosen, as it presented the advantage of the delivery of a living child and involved the mother in less risk from sepsis. After shaving and washing the pubes, the symphysis was cut down upon and divided, the sides of the pelvis being held by assistants so as not to allow the pubic bones to separate more than one inch, thus avoiding injury to the sacro-iliac synchondrosis. The child was then delivered with forceps, and the sides of the pelvis brought together and held by suturing the soft parts and by placing a tight bandage around the pelvis. At present the child is doing well. The mother is living, but the length of time she had been in labor, the severe lacerations she received before entering the hospital, and her critical condition at the time of the operation, leave her slight chance of recovery.

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In a recent clinical lecture at Bellevue Hospital, Dr. H. M. Biggs, the Bellevue pathologist, strongly contradicted the teachings of most pathologists regarding the ætiology of diabetes mellitus. He took the ground that the malady was in no way due to any diseased condition of the liver; that certain pathological conditions of the liver caused glycosuria, but not diabetes. He said that heredity was a predisposing cause, and that he had often noticed several cases in the same family; that the exciting cause was due to a brain lesion, usually of a trau-

matic nature, or mental anxiety, grief, sudden fright, or mental shock of any kind.

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Peroxide of hydrogen is gaining popularity in the treatment of gonorrhœa. It is being extensively used in the Out-door Poor departments, and is giving good results, particularly in virgin cases which are seen early in the course of the disease. Its virtues lie in its antiseptic and non-irritating properties; it is used as an injection three times a day, undiluted, ten-volume strength.

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Dr. L. A. Sayre has exsected seventy-three hip-joints. He has done the operation but a few times in late years, because modern physicians are able to diagnose and properly treat hip-joint disease in its incipient stage. In a recent lecture the venerable Professor exhibited a dozen cases upon whom he had performed the operation. Most of them walked without any perceptible inconvenience, were able to run up and down stairs, and apparently had never suffered from the disease. All could walk without the aid of a cane or crutch, and were able to do their work as well as ever. A patient on whom he had operated and removed the head of the femur and upper three inches of the shaft, some years ago, recently won a prize in a skating contest held in Central Park. The good results were due to the care exercised in the preservation of the periosteum, from which new bone developed.

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Although the present epidemic of typhus fever is on the decline, new cases are being found every day. Cases when discovered are taken to Bellevue Hospital, where they are kept in carefully constructed and well heated tents until their removal to North Brothers' Island. The tent plan not only lessens the liability of extension of the infection to the hospital patients, but is a sanitary measure which has been proven to yield good results in any infectious fever. The patients are in no danger of catching cold if not subjected to a draught, the bodily temperature is lowered, and the poison is diluted as it cannot be in a hospital ward or sick-room. The treatment of the patients is to reduce the temperature by baths and antipyretics, keep comfortable, and maintain nutrition, and to relieve restlessness and irritation by the use of opiates and bromides. There are about thirty infected houses in the city, many of which are cheap lodging-houses. The present epidemic is of unusual severity, the death rate being about twenty-five per cent.

New York City, Jan. 12, 1893.

THERAPEUTIC APPLICATION OF GALEGA VERA.

Editor MEDICAL AGE:

I desire to call the attention of physicians to a very common form of back-ache which is often erroneously diagnosed and hence not successfully treated. The wearing pain is really located in the kidneys.

The patient is not always able to locate the source of the pain, often thinking it is in front. If it seems to be on the left side, the physician may charge it to the spleen; if on the right side, to the liver. It is often supposed to be in the groin, and I have known women to uselessly suffer much treatment for ovarian disease who really had only kidney-ache.

The urine is often quite normal, but may contain an excess of urates or phosphates; as albumin is rarely observed, this disorder is functional not organic.

The diagnosis is easy. Examine the kidneys by making firm, deep pressure between the last rib and the ilium, near the spine, upward and inward; if this disease be present, the patient will instantly admit you have found the real seat of the suffering.

The following treatment is always successful; I have never known it to fail in one case:

I give two or three drops of the tincture of the chloride of iron, and eight or ten drops of the sweet spirit of nitre, in a little water, half an hour before meals; and after meals a tablespoonful of the liquid Galega Vera. The plant *Galega Vera* grows in Southern Europe; the leaves are the part used; the preparation can be procured through any wholesale druggist.

Galega Vera is also a most effective reconstructive, yielding better results in cases of anæmia and impaired nutrition than any preparation with which I am acquainted.

V. R. DORRETTA.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

CREASOTE IN PULMONARY PHTHISIS.

The authors of the new Traité de Médecine, of which Charcot is the founder and inspiring spirit, in the masterly article which they have devoted to "Phthisis Pulmonalis," give a long chapter to the consideration of remedies reputed to be bactericidal. They conclude that "of this long list of medicines, not one of which has not at some time been vaunted as specific and curative, there is, besides the volatile essences, only one—namely, creasote—which is likely to hold a permanent place in the materia medica."

The best modes of administration of creasote are ingestion by the stomach under the form of alcoholic solution, creasote lavements, and the inhalation of vapors of creasote under pressure. These authorities affirm that creasote and its essences, after penetrating the organism, are eliminated by way of the respiratory passages, where they effect a certain degree of antisepsis. The effect of creasote is real, but feeble, on the bacillus of tuberculosis; it has a much more powerful effect on the microbes secondarily associated with the bacillus; the essences act only on the secondary infections, and have no influence on the bacillus of tuberculosis. It is possible that these substances may also act as nutritive stimulants.

Bouchard, who was one of the first to introduce creasote into the therapeutics of pulmonary phthisis, does not regard the pill form with very much favor, and affirms that these pills are likely to pass through the digestive tube unchanged. He proposes the combination with cod-liver oil, and with tincture of gentian and Malaga wine, of which the formulæ are as follows:

℞ Beechwood creasote, 50 grammes (1⅔ oz.).
Cod-liver oil, q. s. to make 1 liter (about 2 pints).

M. Sig. Take one or two spoonfuls night and morning.

℞ Creasote, 13.50 grammes.
Tinct. of gentian, 30 grammes.
Alcohol, 250 grammes.
Malaga wine, q. s. to make Oij.

Dose: A tablespoonful several times a day. The dose should be diluted in a considerable quantity of water, otherwise it will irritate the stomach.

The introduction of creasote by the rectum was first proposed by Revillet. His formula for the creasote lavement is as follows:

Water, 200 grammes.
Beechwood creasote, 2 to 4 grammes.
Oil of sweet almonds, 25 grammes.
Yolk of egg, No. 1.

M. Dissolve the creasote in the oil, then add the yolk of egg, beating the while into an emulsion; then add the water. Give this lavement in the evening, just before bedtime.

After giving the lavement, which is generally well retained, the signs of absorption manifest themselves rapidly; the patient has almost instantly the taste of creasote in the mouth, and the urine becomes of a dark greenish color.

Chabaud also administers creasote in lavement, but under the form of *creasote water*. He dissolves from half a fluidrachm to a drachm in about five ounces of water, and after thorough shaking administers the whole as a lavement. But the creasote must be pure. He prescribes *rectified* beechwood creasote. The solubility of creasote in water is greatly favored by first dissolving it in a little alcohol or brandy. His favorite prescription is as follows:

℞ Rectified creasote, 3 grammes.
Cognac, 10 grammes.
Distilled water, 200 grammes.

Mix and shake.

This may be all given for one rectal injection, and the injection may be repeated once or twice during the day. Enormous quantities of creasote may be absorbed in this way.

Guiter also favors the administration of creasote by lavements, and says that the creasote water is perfectly tolerated by the rectum and wholly absorbed. Thirty drops

of creasote dissolve completely in about four ounces of warm water. He injects this quantity twice or three times a day.

Kugler has made suppositories containing from seven to fifteen grains of creasote, and finds this a good way of giving a medicine which too often is not well tolerated when taken by mouth.

Creasote has been given in inhalations, in sprays, in intratracheal or intrapulmonary injections. Constantine Paul favors especially the inhalations. The common inhaling-bottle with two tubes answers the purpose, and a 10-per-cent solution of creasote in alcohol and water may be used.

Creasote sprays—employed by the aid of the steam-atomizer and a one-per-cent. solution of creasote in alcohol, glycerin, and water—have been long in use in certain sanitaria, but they are giving place to the inhalations of creasote vapor under high pressure, which require a special and somewhat complicated compressed-air apparatus.

The intratracheal and intrapulmonary injections have thus far not given favorable results.

Of late, attention has been called to the advantage of administering creasote by the subcutaneous method. Gembort, who most enthusiastically advocates the hypodermatic mode, employs a solution in olive oil, one part to fifteen, and introduces under the skin of the thorax from ten to thirty cubic centimeters of this solution. The medicament, when thus introduced, is but slightly painful, and is rapidly absorbed. The injection is made very slowly and by a special air-pressure apparatus. Burlureaux and Guiter have carried this method so far as to inject six grammes of creasote at one time. Guiter says that an ordinary hypodermic syringe will suffice, provided it be first sterilized in boiling water. The olive oil in which the creasote is dissolved must be sterilized by washing in alcohol, and by heat; and the skin of the patient should be disinfected by scrubbing with sublimate water or naphtholated alcohol. Great care must be taken that the needle does not enter a vein.

It is too early yet to pronounce a final opinion as to the utility of these subcutaneous injections, which certainly seem to have no advantage over the lavements; and the latter, to say the least, do not demand so much preparation and so much care.

As to the *modus operandi* of creasote, it probably does not do good in pulmonary phthisis by any antibacillary action. The antibacillary power of creasote is feeble. It is said to have a much more marked influence on the microbes of the secondary infections which are ordinarily associated with the bacillus of tuberculosis. From this point of view, says Marfan, it is the most powerful of balsamic preparations; under its influence we see the cough and expectoration diminish, and the bubbling râles become less abundant. Besides, creasote, which is badly tolerated by some phthisical patients, exercises in others a favorable stomachic action; it arouses the appetite and lessens the pains which follow the ingestion of food.

Peter and Ferrard explain the mode of action of creasote somewhat differently. They think that the elimination of the remedy by the lungs produces in the tissues which it traverses a simple inflammatory state, which substitutes itself for the specific catarrh and causes the latter to disappear. Peter adds that the employment of creasote is more useful for the protection of healthy tissues than for the cure of those that are already invaded by tuberculosis. Guiter thinks that creasote acts much more as an irritant favoring a curative sclerosis than as a microbicide.

It has been found that not all phthisical patients are benefited by creasote. A constant febrile condition is generally a contra-indication. Apyretic patients, or those whose febrile attacks are only occasional or remittent with long apyretic intervals, generally tolerate it well. In cases where the remedy is well borne, the dose should be gradually increased to twenty or thirty grains a day; the medicine being first given by the stomach, and then, if symptoms of intolerance appear, by the rectum. Neither diarrhœa, hæmoptysis, or albuminaria contra-indicates its use.

THE MICROBE OF ERYSIPELAS.

The New York Medical Record, Jan. 14, 1893, reports from the Revue de Médecin, December, 1892, the experimental investigations recently made concerning the microbe

of erysipelas by Dr. H. Roger in Bouchard's laboratory.

Dr. Roger found that cultures of this coccus injected into the veins of rabbits caused sometimes an acute septicæmia, sometimes a chronic malady characterized by a progressive cachexia and polio-myelitis with muscular atrophy.

Inoculated under the skin, they caused fatal septicæmia, erysipelas, or simple abscess, according to the virulence of the lesion. Immunity against the infection was secured by various procedures, such as the injection or inoculation of attenuated products. If the microbe was cultivated in serum taken from vaccinated animals, a growth was obtained which had little virulence; in other words, the serum "attenuated" the microbe. On the other hand, if the organisms were grown in serum from non-protected animals, their virulence was increased.

The practical and clinical problem which ought to be next attacked is, whether the attenuated microbe can do any good in animals or persons already affected with the erysipelas poison.

THE INTERNATIONAL MEDICAL CONGRESS OF 1893.

An Italian correspondent of the London Lancet writes: "Dr. Baccelli has returned to Rome and resumed with redoubled energy the preparations for the international reunion of the profession to be held in the last week of September, 1893. In addition to the work of mapping out the agenda of the various sections and appointing their *personnel*, he is engaged in pushing forward to completion the great hospital of the Policlinico Umberto I, which has been slowly rising from its foundations outside the Porta Pia, at the southeastern quarter of Rome. The building, over and above its many novel and striking features, some of them unique in hospital construction and all of them calculated to facilitate its working as a clinique of the first order for research, for treatment, and for tuition, will also present not a few artistic details peculiarly interesting to the profession at large. The façades of the two sections devoted to clinical medicine and clinical surgery will each have a memorial, sculptured in bas-relief, of the most momentous innovations in these departments—one of them devoted to Morgagni, the father of modern pathology; the other dedicated to Lister, the pioneer of antiseptic practice. These designs, which have been in the hands of competing sculptors and are shortly to assume shape, will not be the only ornament of an artistic kind which will lend attraction to the Policlinico Umberto I. Its administrative offices, constituting the Palazzo dell' Amministrazione del Policlinico, will also have the façade adorned by a group in bas-relief representing some characteristic event or incident in the history of therapeutics. A programme, drawn up by the Superior Council of Public Works, to regulate the competition for this art product, has been approved, the competitors to be drawn from the sculptors who either reside or have their studios or professional residences in Rome. Their work must be sent in and the successful group decided on in time to occupy its place on the façade in the autumn of 1893.

"With regard to the other hospitals in which Rome abounds, and the unsatisfactory state of which has frequently been described, it is reassuring to know that the Government is fully alive to the necessity of rehabilitating them, so as to make them at least 'present able' when the heads of the chief clinics commence to arrive. The Commendatore Silvestrelli, who acted as Royal Commissioner to inspect, report upon, and improve these hospitals, has resigned, mainly, it is said, on account of the insufficient pecuniary appropriation placed at his disposal for the carrying out of his suggestions. A substitute for him has been found in the Senator Colucci, and Dr. Baccelli and his colleagues have from the Prime Minister, Signor Giolitti, assurances tending to allay their doubts as to the provision afforded under the new arrangement for keeping the actual *personnel* of the hospitals up to its normal strength, so as nowise to impair their efficiency in the interests of the public or the profession. Amid the many demands on the State purse of Italy, none are more justified than these of her medical and surgical services, no country in Europe being in greater need of such adjuncts to national well-being or possessing greater ability to turn them to profitable account for the healing art as a whole."

Book Notices.

INTERNATIONAL CLINICS, VOLUMES I, II, AND III. A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynæcology, Ophthalmology, Laryngology, Otology, and Dermatology. By Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain, and Canada. Edited by John M. Keating, M.D., Colorado Springs, Col. [Fellow of College of Physicians, Philadelphia; formerly Consulting Physician for Diseases of Women to St. Agnes' Hospital; Gynæcologist to St. Joseph's Hospital; Visiting Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children, Philadelphia; Editor "Cyclopædia of the Diseases of Children"]; Judson Deland, M.D., Philadelphia [Instructor in Clinical Medicine, and Lecturer on Physical Diagnosis and Symptomatology in the University of Pennsylvania; Assistant Visiting Physician to the University Hospital; one of the Examiners of the Insane to the Philadelphia Hospital; Visiting Physician to St. Clement's Hospital, Philadelphia]; J. Mitchell Bruce, M.D., F.R.C.P., London, England [Physician and Lecturer on Therapeutics at the Charing Cross Hospital]; David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland [Professor of Practice of Medicine in the University of Aberdeen; Physician to, and Lecturer on Clinical Medicine in, the Aberdeen Royal Infirmary; Consulting Physician to the Royal Hospital for Diseases of the Chest, London]. Published by J. B. Lippincott Co., Philadelphia. 1892.

No better indication of the scope and character of this work could be given our readers than by affording them information of the topics these three volumes cover, and the names of the distinguished authors who have condensed the fruit of their special experience:

Contents of Volume I. — The Pulmonary Complications of Influenza, by J. M. DaCosta, M.D., LL.D. On Some of the Clinical Types of Cirrhosis of the Liver, by David Drummond, M.A., M.D. (T.C.D.). Pulmonary Emphysema, by J. West Roosevelt, M.D. Pernicious Anæmia, by Alexander McPhedran, M.B. The Diagnosis of Pulmonary Tuberculosis, by Theodore Williams, M.A., M.D., F.R.C.P. Grave's Disease, by Arthur Wynne Foot, M.D. Night Sweats of Phthisis, by T. E. Taylor, B.A., M.D. Acute Intestinal Obstruction and Peritonitis the Result of Enteric Fever, by P. Blaikie Smith, M.D. Empyema and Its Treatment by Valvular Drainage, by A. M. Phelps, M.D. A Case of Typhoid Fever Complicated with Pregnancy, Subsequent Relapse and Development of Tuberculosis; by Richard Lea MacDonnell, M.D. Occupation and Pulmonary Disease; the Diagnosis and Treatment of Pulmonary Consumption; by William Buckingham Canfield, A.M., M.D. Multiple Sclerosis of the Spinal Cord; the Mode of Walking in Hemiplegia; by J. M. Charcot, M.D. Diphtheritic Paralysis, by Hector W. G. MacKenzie, M.A., M.D., Cantab., M.A. Edin., M.R.C.P., London. Paralysis Agitans, by Francis X. Dercum, M.D. General Paresis, by B. Sachs, M. D. Intracranial Tuberculosis; Hydrocephalus; Cerebellar Tumor; Leptomeningitis; by W. B. Pritchard, M.D. Hemiplegia and Motor Aphasia Due to Embolism Occurring During a Mild Attack of Rheumatism, by Howell T. Pershing, M.Sc., M.D. Rickets, by F. Forchheimer, M.D. On the Examination and Treatment of Eye Diseases in Children, by R. Marcus Gunn, M.A., F.R.C.S. Treatment of Constipation in Children, by O. P. Rex, A.M., M.D. Fracture of the Neck of the Femur; Fracture of the Humerus; Fracture of the Radius; Fracture of the Lower Jaw; by John Ashhurst, Jr., M.D. Vertebral Caries, by J. W. Hulke, M.D., F.R.S. Traumatic Neurosis of the Hip-joint Simulating Coxitis, by Louis Bauer, M.D., M.R.C.S. Excision of the Breast, by A. Pearce Gould, M.S., F.R.C.S. Some Forms of Abdominal Tumors, by Albert Vander Veer, M.D. Suppurative Synovitis Following Parturition; Tubercular Arthritis After Typhoid Fever, Requiring Arthrectomy; Tubercular Arthritis Subsequent to Cold Abscess, Requiring Resection; by John B. Roberts, M.D. Hydrocele, by Charles T. Parkes, M.D. Treatment of Acute Anterior Urethritis, by Edward Martin, A.M., M.D. The Treatment of Bladder Tumors, by Francis Sedgwick Watson, M.D. Syphilis as an Ætiological Factor in Diseases—Its Pathology, Practical and Clinical Importance; Aneurism of the Basilar Artery; Miliary Aneurism of the Arterioles of the Cerebrum; Pistol-shot Wound of the Head Followed by Cerebral Abscess; Chronic Syphilitic Meningitis; by William Henry Porter, M.D. Dermoid Cyst of the Right

Ovary, by William Goodell, M.D. Polycyst of Left Ovary; Twisted Pedicle; General Peritonitis; Adhesions; Cystic Degeneration of Right Ovary—Removal—Recovery; Laparotomy for Diseased Ovaries and Tubes; Alexander's Operation for Shortening the Round Ligaments; the Flap-splitting Operation for Complete Laceration of the Perineum; by Paul F. Mundé, M.D. Malignant Disease of the Uterus, and its Treatment, by E. E. Montgomery, M.D. Operative Treatment of Trachoma, by J. F. Fulton, M.D., Ph.D. Ocular Symptoms in Bright's Disease, by Thomas R. Pooley, M.D. Simple Aphonia—Laryngeal Neoplasm, by W. E. Casselberry, M.D. Benign Growths of the Larynx, by G. M. Lefferts, M.D. Zona, or Herpes Zoster, by A. H. Ohmann-Dumesnil, M.D.

Contents of Volume II.—The Late Professor Agnew, by John Ashhurst, Jr., M.D. A Case of Myxœdema, by David W. Finlay, F.R.C.P. Myxœdema, by Thomas Oliver, M.A., M.D., F.R.C.P. Dropsy, by P. H. Pye-Smith, M.D., F.R.S. Cardiac Dilation, by J. M. Anders, M.D., Ph.D. Arterial Sclerosis, by J. E. Atkinson, M.D. Diagnosis of Cancer of the Stomach, by Frederick P. Henry, A.M., M.D. Carcinoma of the Stomach and Intestine; Chronic Intestinal Obstruction; by Alfred H. Carter, M.D. Localized Ascites from Tubercular Peritonitis; Tubercular Pleurisy; by Frederick Taylor, M.D. The Tonic Treatment of Indigestion, by Thomas J. Mays, M.D. Epilepsy of Organic Origin; Left Hemianopsia; Defective Development of Right Occipital Lobe; Motor Aphasia and Hemiphlegia; by M. Allen Starr, M.D., Ph.D. Cerebellar Titubation; Sunstroke Sequelæ; Syringomyelia; Traumatic Hysteria; by F. X. Dercum, M.D. Sporadic Cretinism, by James Hendrie Lloyd, A.M., M.D. Alcoholic Multiple Neuritis; Acute Locomotor Ataxia; by James Hendrie Lloyd, A.M., M.D. General Paresis of the Insane, by B. Sachs, M.D. Cerebral Tumors, by G. A. Gibson, M.D., D.Sc., F.R.C.P., Edin. Infantile Syphilis, by F. Forchheimer, M.D. Common and Important Lesions of the Skin met with in General Practice Among Children, by T. M. Rotch, M.D. Hip-joint Disease; Cystic Tumor of the Neck; by John Ashhurst, Jr., M.D. The Axial Rotation of Abdominal Tumors, by J. Bland Sutton, M.D., F.R.C.S. Continuous Immersion, by Roswell Park, A.M., M.D. Stone in the Kidney, by Robert Saundby, M.D., F.R.C.P. Stone in the Bladder, by Charles B. Nancrede, M.D. Dislocation of Cervical Vertebræ, by G. L. Walton, M.D. Inguinal Hernia and Herniotomy, by N. F. Graham, M.D. Deformity After Hip-joint Disease Following the Extension Treatment; Osteotomy for its Correction; Recovery with a Useful Extremity; by Joseph L. Bauer, M.D. Diabetes Mellitus, by James Tyson, M.D. Syphilis as an Etiological Factor in Diseases—Its Pathology, Practical and Clinical Importance; Aneurism of the Basilar Artery; Miliary Aneurism of the Arterioles of the Cerebrum; Pistol-shot Wound of the Head Followed by Cerebral Abscess; Chronic Syphilitic Meningitis; by William H. Porter, M.D. [lecture ii]. Special Operations for the Removal of Bladder-Tumors and the Treatment of Malignant Tumors of the Bladder, by Francis Sedgwick Watson, M.D. A Case of Primary Squamous Carcinoma of the Bulbous Portion of the Urethra, by Marcus Beck, M.S., F.R.C.S. Gonorrhœal Epididymitis, by Henry C. Simes, M.D. Chronic Ovaritis and its Treatment, by Alex. J. C. Skene, M.D. A Compound Presentation; Large Cyst of the Labium; Inversion of the Uterus; Three Cases of Nervous Break-down from Ovarian Disease; An Intraperitoneal Abscess from Gonorrhœa; A Large Fibroma Removed from a Puerpera; by Barton Cooke Hirst, M.D. Uterine Hæmorrhage, by Henry C. Coe, M.D. The Treatment of Advanced Forms of Uterine Cancer, by Thomas A. Ashby, M.D. Hysterical Blindness, by William Oliver Moore, M.D. Miscellaneous Ophthalmic Cases, by James McKenzie Davidson, M.B., C.M. Adenoid Growth in the Post-Nasal Space, by John M. Mackenzie, M.D. Treatment of Acute and Chronic Pharyngitis, by G. M. Lefferts, M.D. Hereditary and Tertiary Syphilis of the Upper Respiratory Tract, by W. E. Casselberry, M.D. Lichen Planus; Fevers; Ringworm Complicated by Kerion; by James Nevins Hyde, M.D. Spontaneous Keloid, by A. H. Ohmann-Dumesnil, A.M., M.D. Some Common Forms of Diseases of the Ear, by Charles H. Burnett, M.D.

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nition. by J. Orne Green, M.D. Lymphadenoma; Treatment of Otorrhœa; by Beverley Robinson, M.D.

A MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students. By A. A. Stevens, A.M., M.D., Instructor of Physical Diagnosis in the University of Pennsylvania, and Demonstrator of Pathology in the Woman's Medical College, Philadelphia. Illustrated. Published by W. B. Saunders, 913 Walnut street, Philadelphia. 1893.

Pope truly says: "Half our knowledge we must snatch, not take." If this be true of general knowledge, it is certainly true of the knowledge of medicine as it is taught in the schools to-day. In view of this fact, there seems to be a real need for books which present their subjects in an assimilable form.

At the request of many students the author has written this book, with the hope that it may serve as an outline of practice of medicine which shall be enlarged upon by diligent attendance upon lectures and critical observation at the bedside.

In its preparation the writings of the following authors have been freely consulted: Strumbell, Osler, Fagge, Bristowe, Frerichs, Liebermeister, Vierordt, Eichhorst, Wood, Ross, Gowers, Sansom, Henry, Tyson, Pepper, Paul, Murrell, Starr, Hilton, Duhring, Stelwagon, Van Harlingen, Tilbury, Fox, Hardaway, Seiler, Cohen, Browne, Jacobi, Bruce, Brunton, Charcot, Dujardin-Beaumetz, Pavy, Mitchell, and Trousseau.

It covers in condensed form a vast amount of knowledge concerning modern methods of practice.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS; with Especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc. Third edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers & Co. 1892.

This valuable work will be reviewed in the next number of THE AGE.

THE STUDENTS' QUIZ SERIES. Histology, Pathology, and Bacteriology. A Manual for Students and Practitioners. By Bennett S. Beach, M.D., Lecturer on Histology, Pathology, and Bacteriology, New York Polyclinic. Published by Lea Brothers & Co., Philadelphia.

Notes and News

A New Method of Removing the Prostate Gland.—

Pyle (Medical Record, August 6, 1892) describes an operation for removal of the hypertrophied prostate, which he has performed with success on a patient aged 70. The space immediately in front of the rectum and behind the bulb of the urethra was chosen as the route through which to reach the prostate gland. A semicircular incision was made immediately in front or the anus, and carried through the connective tissue between the bulb of the urethra and the rectum. This incision, it is stated, gives a ready access to the field of operation, and is made with very little hæmorrhage, as all spurting vessels are situated to the outside and in front of the wound. After the integument and tough fascia have been divided, the handle of the scalpel may be used to separate the loose connective tissue between the rectum and urethra, until the fascia covering the levator ani is exposed. After division of these structures the enlarged prostate will be seen. The finger is the most convenient instrument in this operation, and should be freely used in opening up the deeper parts of the wound. The prostate should now be seized with a pair of vulsellum forceps, and dragged to the surface. If the gland be very large, the lobes may be removed separately. A curved steel sound should be introduced into the bladder before the operation, in order to indicate the situation of the urethra, and to keep the base of the bladder from slipping upwards while the prostate is being separated.—*British Medical Journal*, Sept. 9, 1892.

To Abolish the Death Penalty.—

A very determined effort will be made this winter to have the Legislature repeal the section of the penal code relative to the infliction of the death penalty, and have adopted in its stead a life-imprisonment section as the severest penalty to be inflicted for murder in the first degree. Some of the strongest advocates of abolition of the death penalty are returned to the Legislature this year, and it is intimated by those who intend to press the matter that Governor Flower is

not averse to its adoption, and in fact favors it. The proposed bill will take from the chief executive the power of pardon, and allow pardons to be granted by the court alone, upon the presentation of new evidence of an extenuating nature. There are at present eleven murderers in the various State prisons awaiting death, but the repeal of the law could not be effected in time to save any of these men, and, in fact, could not in any event, as it would not be retroactive.—*New York Medical Record.*

A Good Prescription.—

Dr. A. J. Skene is credited as being the author of the following prescription for a banquet:

℞ Extracti carnis in poculis, ℥ ij.
Olivæ Hispanicæ, ℥ ss.
Amygdalæ salsæ, ℥ j.
Raphani, ℥ ss.
Panis carnisque varietatis, ℥ viij.
Astici cum condimento Auroro, ℥ iv.
Vini Burdigalensi, ʒ j.
Crusti glandii vitulini, modo Regino, lb. ss.
Calidi quoddam Washingtoniensis, ʒ ij.
Acetariæ e pullia gallinaceis, ℥ ij.
Acetariæ e astacis, ℥ j.
Solani esculenti cum condimento Mayonnaiseo, ℥ j.
Vini Gallici, ʒ vj.
Cremoris glacis vanillæ, ʒ j.
Pastellæ varæi, gr. iij.
Pomæ diversæ, gr. v.
Caffeæ, ℥ ij.
Spiriti frumenti, ad libitum.
Spiriti vini Gallici, ad libitum.
Aquæ puræ, q. s.
Herbæ Nicotianæ.

M. Sig.: ℥ ij every five minutes.

—*Times and Record.*

The Comfort of Physicians.—

At intervals during the coming year it is proposed to issue supplements to the Medical Record, devoted to every-day phases of professional life which do not come within the strictly scientific sphere of the journal. Although the hardest-worked class among educated men, physicians give too little attention to securing comfort, rest, and relaxation, and an effort will be made at least to suggest methods of alleviating the hardships of the daily routine, and of using every advantage of modern civilization. The first supplement of this series will appear early in 1893, and will be devoted to methods of conveyance, embracing every form of vehicle used by physicians, horses, clothing for man and beast, creature comforts, medicine-chests, saddle-bags, and office furniture.—*Medical Record*, Dec. 24, 1892.

Advertising by Physicians.—

The editor of the Lancet-Clinic discusses the pros and cons of this question at length, and concludes his consideration of the subject by the following advice:

"Leaving the newspaper out of consideration, a physician has two legitimate channels for advertising—first, the medical journal; and second, the reputation of knowing and attending to his business. In other words, ability to be a scientific physician is of more pecuniary value to a man than all the newspaper advertising he can possibly receive. 'The best advertisement for a physician is the confidence and respect of his brother-physicians.' This is a truism of great value and of far-reaching import. If all physicians appreciated the value of this confidence and respect, there would be fewer men anxious to appear in the public press."

Sea-sickness.—

A preventive measure proposed by Dr. Ames Brunton in the British Medical Journal of recent date consists in the applying of a leather strap around the lower part of the thorax and epigastrium. It is put on previous to going on board, and is drawn very tight, and must be kept on till the traveler gains his "sea-legs." This hint, Dr. Brunton says, he "obtained from a gentleman who was previously a martyr to sea-sickness, but now in his frequent journeys across the Channel makes them with comfort. If necessary, a pad over the epigastrium can be added.—*New York Medical Record.*

$1,000,000 for the Endowment of a Medical Department at the Chicago University.—

It is stated that both the Rush Medical College and the College of Physicians and Surgeons, of Chicago, have offered to give up their entire property to the Chicago University, and the faculties to resign unconditionally, in order that a medical department may be organized on a level with other schools in this already wonderfully well organized institution. $1,000,000 is in sight for the endowment of such a medical department.

Therapeutic Brevities.

Action of Spermine on Cholera Bacillus.—In 1886 A. W. Poehl (Berichte d. Deut. Chem. Gesellsch., vol. xix) showed (1) that the cholera vibrio gives rise to reduction processes in the nutrient medium, and thus favors the formation of ptomaines; and (2) that the microbes elaborate a peculiar substance, which, when treated with concentrated hydrochloric acid, forms a characteristic red pigment (the "cholera red"). On the other hand, he has recently proved that spermine possesses a catalytic action with regard to oxidation processes in general, and an intra-organic oxidation of leucomaines in particular. Quite recently he published (Vratch., No. 44, 1892) his researches on the influence of spermine on the biological properties of cholera microbes. Two sets of test tubes were simultaneously inoculated with the same pure culture of the bacillus, one of which contained a pure meat peptone gelatin, while in the other 1 part of a 2-per-cent. solution of Poehl's spermine was added to every 10 parts of the medium. On examination a few days later, the first set showed the presence of the characteristic red pigment, while in the sperminized series no pigment could be detected, though the growth of the bacteria showed no deviation from that in the control tubes. From the experiments Poehl draws the conclusion that, "when growing in a sperminized medium, the cholera bacilli cease to promote the formation of ptomaines." As is known, Brieger, Kitasato, and Wasserman have discovered that when cultivated in a thymus infusion the cholera vibrio loses its virulence. According to Poehl, this is due to the agency of spermine, which occurs in the gland in abundant quantity.—*British Medical Journal*, Jan. 7, 1893.

The Treatment of Buboes by the Wallander Method.—Spretschka (Centralblatt für Chirurgie, No. 37, 1892) describes two different methods that may be adopted in the treatment of buboes:

(1) Early and complete removal of the diseased glands.

(2) Consists in adopting such measures as the application of ice, tincture of iodine, poultices, etc., to prevent the formation of pus. If there is suppuration of the gland then, only a small incision is made and the detritus removed with a curette.

Wallander has had most favorable results from the injection of benzo-quicksilver into the diseased glands. Of the sixty-two cases treated by the author, twenty-three could only be cured by the use of the above-named remedy. One or two injections can be made in the center of each gland. After the injection there is considerable increase of the pain and marked increase of temperature, while often a drop of pus may be seen at point of puncture. There is often great increase in the swelling, but in from twelve to twenty days this begins to disappear.

The second group comprises twelve cases. In these a small incision was made along with the injection, because after the injections fluctuation was noticed. The incision was scarcely a centimeter in length; and after allowing the pus to drain off, the cavity was washed with a solution of corrosive sublimate 1:1000, the cavity closed, and the whole dressed antiseptically. A cure was obtained in these cases in an average of about twenty-eight days.—*University Medical Magazine*, December, 1892.

Medical Treatment of Rectal Cancer.—The question of medical treatment of cancer of the rectum, in contradistinction to surgical procedure, is an interesting one, seeing that the latter is of so little promise in many cases, and that a very short immunity only from recurrence is obtained after running the gauntlet of a severe surgical operation. For such cases, where the disease is advanced and the progress slow, M. Dujardin-Beaumetz has devised a plan of treatment of which he reports favorably, and which he credits with being able to prolong the patient's life longer than could be hoped for after an operation, even when successful. With this end he has recourse to intestinal washings with antiseptic solutions, so as to arrest, or at least diminish, the progress of the malady by removing the pus and secretions frequently. A solution of naphthol—10 to 20 centigrammes per cent.—is what he advises. In addition to this, he disinfects the intestinal canal by exhibiting salol or benzo-naphthol with bicarbonate of soda, in wafers by the mouth. Laxatives must also be given to prevent any accumulation in the colon, and M. Beaumetz is of opinion that a diet consisting largely of vegetables is also advisable. He has at present under observation three patients suffering from rectal cancer, who for the last three years have been subjected to this method of treatment, and who have even gained in flesh. He is satisfied that the method is superior to extirpation.—*The Lancet* (*Medical Record*, Nov. 19, 1892).

Shock.—Concerning the use of strychnine as a remedy for and preventive of surgical

shock, anæsthetic collapse, and opium-poisoning, Dr. H. A. Hare advises that it be given in full doses or not at all. Not less than a twentieth of a grain should be used hypodermatically every half-hour for an adult; and if the shock be marked, a dose of as much as a fifth of a grain may be given in this way. Disagreeable effects rarely follow, and will probably amount to no more than muscular twitching, which can be readily controlled by sedatives. In describing a visit to Professor Horsley's laboratory, he says that a monkey upon which a brain experiment was being performed was placed in a water bath and well covered to attain the proper heat. This is considered necessary for the survival of the monkey, and from it may be inferred that the application of heat about the body of a person undergoing an operation is of the greatest importance. The same is also true in cases of hæmorrhage and shock. Experiments by Brunton show that animals poisoned with chloral die from doses which, when artificial heat is given them, fail to produce dangerous symptoms. — *Boston Medical and Surgical Journal*, Jan. 12, 1893.

The Embellate of Ammonia as an Anthelmintic.—Dr. Giusto Coronedi has studied this preparation, which is derived from the seed of *Embellia ribes* (nat. ord., Myrsinaceæ). The symbol of embellic acid is $C_9H_{14}O_2$; it is insoluble in water, does not decompose on prolonged boiling with sulphuric or hydrochloric acid, and forms salts with sodium, potassium, and ammonium ($C_9H_{13}O_2NH_4$), the latter appearing as crystals or an amorphous powder, of a rose color, slightly soluble in cold water, and forming with diluted alcohol a beautiful red solution. The dose is three to six grains. He concludes that it is a remedy to be recommended against lumbricoids and tæniæ, and that it is much more poisonous to the parasites, and less so to the host, than other substances used for this purpose. The administration, on account of the caustic taste of the ammonia, is best in powder form in a wafer. If it is used in large doses as a vermicide, a purgative twenty-four hours later will be sufficient; if only as a vermifuge, the purgative should be administered at the same time or shortly after the remedy.—*Lo Sperimentale*, 1892, fasc. 2, p. 141.

Subcutaneous Injections of Phosphate of Soda in Nervous Affections.—Crocq (Gaz. Medical de Liège, October, 1892) reports his results in the use of subcutaneous injection of phosphate of soda (2 grammes to 100 grammes of laurel water); three cubic centimeters of this solution are to be injected subcutaneously in the arm or leg, with strict antiseptic precautions. At first the injections are to be given every day, and afterwards on alternate days.

No reaction followed these injections, only a slight burning sensation at point of puncture, lasting only a few seconds.

The author states that the drug used in this manner is a powerful nerve tonic, which will generally effect a cure in cases of functional disorders of the nerve centers, but can only exert a palliative influence in organic lesions.

Several cases of locomotor ataxy are reported to have been greatly benefited by the use of this drug.—*University Medical Magazine*, January, 1893.

A New Urethral Irrigator for the Treatment of Gonorrhœa.—Messrs. Krohne and Sesemann have, at my suggestion, made an irrigator for the male urethra which will be found very efficacious in the treatment of gonorrhœa in the male. It consists of two parts—a guide and a washing-tube. The method of using it is, briefly, as follows: The urethra having been cocainized, the guide is introduced to just beyond the inflamed mucous membrane, the extent of which has been previously noted by urethroscopy. The washing-tube is attached by a piece of india-rubber tubing to a receptacle containing the solution with which it is desired to irrigate. The flow being from behind forwards, all secretion, etc., is washed out; and as the guide puts the mucous membrane of the urethra upon the stretch, it is placed in the best position for the application of whatever solution the surgeon may elect to employ.—Edward Cotterell, F.R.C.S.Eng., in *British Medical Journal*, Jan. 7, 1893.

Treatment of Burns.—The most exquisitely painful burns are assuaged in a few moments by an application of cocainized Campho-Phenique, after the following formula:

℞ Cocaine hydrochlorate, gr. v.
Campho-phenique, } ää ʒ ss.
Olive oil, }

M. Rub up the cocaine and Campho-Phenique, and add the olive oil.

A man whose hand had been torn and badly burned by an electrical discharge, the pain of which was so severe that he fainted twice before the dressing could be applied, expressed himself as absolutely without pain in less than one minute after the application. —*Medical Review*, Nov. 5, 1892.

Rectal Gonorrhœa.—Fritsch (Centralblatt für Gynäkologie, 1892, No. 34) calls attention to the obstinate character of gonorrhœal proctitis, and reports a case in which after six months' treatment gonococci were still found in the discharge. An examination post-mortem showed numerous ulcers. The entire mucosa was filled with cocci, lying mostly within the leucocytes which surrounded Lieberkuhn's glands; the submucosa was not invaded. The writer thinks that many supposed syphilitic ulcers of the rectum of obscure origin are really to be attributed to chronic gonorrhœa.—*American Journal of the Medical Sciences*, December, 1892.

Creasote Treatment of Tuberculosis.—Dr. H. S. Stark (Therapeutic Gazette) says:

1. Creasote is no longer an innovation or a fad, but a drug which has come to stay as an antitubercular remedy.

2. Creasote is particularly valuable in the earlier stages of tuberculosis.

3. Its administration must be in moderate doses for a prolonged period.

4. That it is a safe and reliable prophylactic in the condition that is usually described as pretubercular anæmia.

5. It should be administered in combination with approved adjuvant remedies.

Creasote is now prescribed so frequently for so many affections of the stomach and lungs that a Vienna pharmacist serves it from his soda-fountain, and has numerous customers for it. The following is the formula for the syrup:

℞ Creasote, 1 part.
Cognac brandy, 50 parts.
Simple syrup, 300 parts.
Tincture of peppermint, 2 parts.

Mix.

—*Medical and Surgical Reporter* (*Medical Record*, Sept. 17, 1892).

For Obstinate Vomiting of Pregnancy.—Fluid extract golden-seal has, according to Fedorow (Therapeutische Monatshefte, 1892, 564), proved to be an excellent remedy in the treatment of obstinate vomiting in pregnancy. Fedorow prescribes 20 drops of the fluid extract four times daily.

Rheumatic Pains.—Rhus toxicodendron is recommended by several writers in the American Therapeutist as particularly efficacious in sciatica and other forms of neuralgia occurring in individuals with a rheumatic tendency.—*Medical Record*, Sept. 17, 1892.

Medical Progress.

Treatment of Pneumonia.—Among the articles published in the January Medical World devoted to pneumonia is one on treatment, by Hobart A. Hare, M.D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia.

While at first thought the very antagonistic views by many of the best physicians as to the treatment of this most serious disease, lead us to think of its therapeutics as uncertain, second thought will show that, after all, it is possible for us to employ rational measures of relief and to obtain good results pretty constantly.

In the first place, it is absolutely necessary, before discussing the remedies which are to be employed in pneumonia, to emphasize the fact that pneumonia is a pulmonary consolidation, which is not always accompanied by the same symptoms or associated with identical conditions of the general system. Thus the disease may occur in the person of one who is convalescing from typhoid fever, or its onset may take place during the course of this or some other exhausting disease. On the other hand, pneumonia may strike down an individual who twenty-four hours before was apparently in the most robust and perfect health.

It is evident that the condition of the general system, and particularly of the circulatory system, must be entirely different in an individual suffering from typhoid, complicated by pneumonia, from that of a man who in the best of health is suddenly attacked. In the one instance the severity of the disease, added to the condition of exhaustion already present, can but tend to still further depress the vital forces; while in the case of the individual who is otherwise healthy, the inflammatory processes will result, at first at least, in systemic and circulatory excitement. In both instances we have a condition known as pneumonia, but, as we have said before, the conditions outside the lungs are diametrically opposed. It therefore becomes evident that in the asthenic class of cases it is wise to begin treatment of a stimulating character at once, or at least as soon as the very first signs of cardiac or vaso-motor depression manifest themselves. In the other cases the acute inflammatory process, with its accompanying arterial and cardiac excitement, indicate the use of circulatory sedatives, as aconite, antimony, veratrum viride, or bleeding, at least during the first few hours of the existence of the disease.

It is the object of this paper to recommend very strongly the treatment of pneumonia which has been found of the greatest service in a large experience of the author in the wards of the various hospitals to which he is and has been attached; and this line of treatment is founded absolutely upon a recognition of the general condition of the person rather than upon the cause of his illness.

It is true that many physicians claim to have employed aconite and veratrum viride in the earlier stages in pneumonia, with bad results, while others have resorted to digitalis and other cardiac stimulants at the very beginning of the disease and had no better success. The bad results obtained in both instances have been due to this failure to recognize the indications offered by the patient's system. If the patient has been strong and healthy until attacked by the pneumonia, and is seen within a short time after the initial chill and the consequent rise in bodily temperature, it will be found that his pulse is full and bounding, the cheeks flushed, and the respiration somewhat rapid; at this time, and at no other, is aconite, veratrum viride, or antimony indicated; and the physician seeing that they are indicated, these drugs should be given fearlessly while they are given. They are not to be used hour after hour until twenty-four or forty-eight hours have passed. They are to be given in as full doses as the physician thinks proper, with the idea of so quieting the circulation that less blood will pass to the inflamed lung, and to produce so great a dilatation of the arterial system that it will be easier for the blood to flow into the dilated but healthy blood-vessels than into the hyperæmic and engorged vessels in the diseased lung. This can generally be accomplished if as much as from two to three drops of the tincture of veratrum viride or a similar quantity of aconite, preferably the former, be given every half-hour or hour until the decrease in pulse-rate and pulse-force and the appearance of a slight perspiration indicate that the full influence of the drug has been exerted. If veratrum viride be given early enough, it is certainly competent to abort an acute croupous pneumonia occurring in a previously healthy individual. If it is not given early enough, the result of its administration will be to hurt the patient; and it is the nice question as to when it can be given which the physician must decide and which his skill must determine. He will generally hear, on ausculting the chest before administering these remedies, slight roughening of the respiratory murmur, which may be accompanied by a very few, almost inaudible râles. A careful percussion over the area involved will generally show a slight impairment of resonance, due to the congestion and engorgement. If, however, there is marked dullness on percussion, with blowing breathing and the typical fine crepitant râle of pneumonia, the use of these cardiac sedatives is contra-indicated in most cases because the disease has become thoroughly instituted and the stage is past when the remedy can do good.

In the event of the cardiac sedatives not being administered early enough to abort the disease, the patient then passes on into a condition in which there is a tendency to collapse, or at least to cardiac failure, which tendency increases until after the crisis has passed, and which is due to the engorgement of the lung and the infectious nature of the disease. Here again it is impossible for the physician to prescribe by "rule of thumb." He must carefully listen to the apex beat of the heart, and if it seems at all muffled or feeble he will know that digitalis is indicated. The best results from its administration will follow its use in the dose of not less than 10 minims every eight hours, rather than smaller doses frequently repeated. Particularly is digitalis indicated if, in association with these feeble cardiac sounds, the pulse also seems feeble and, although it may have considerable volume, nevertheless is shuttle-like and devoid of force.

In the majority of cases digitalis alone will not accomplish all that we desire. While we may improve the cardiac action by its use, we still find that, after the first few days of fever, the skin has a tendency to be moist, and the pulse, although large in volume, from the action of digitalis, seems to be surrounded by a relaxed arterial wall. Under these circumstances the tincture of belladonna in the dose of five drops every four hours during the night and day will produce a wonderful change for the better, because it acts as a tonic to the vaso-motor system, tending at the same time to quiet the cough, to allay nervous irritability, and to prevent exhausting sweats. In some instances where there is considerable dyspnœa, it is well to administer no less than one-fortieth and frequently one-twentieth of a grain of strychnine every four to eight hours with the digitalis, and, if the cough persists in the face of the belladonna, one-twelfth to one-eighth of a grain of morphine may be given hypodermatically.

If too much digitalis is given, the pulse is apt to become hobbling, and at each visit of

the physician he should listen to the apex beat to determine whether or not the digitalis should be decreased or increased in amount. If the heart sounds are loud and yet jumbled, probably too much digitalis is being administered and the symptom depends upon over-dosing rather than upon the disease.

It should be remembered that when crisis takes place in pneumonia we should always be on the lookout for collapse and cardiac failure, and for the treatment of this accident no remedies are equal to full doses of strychnine and atropine.

In the asthenic cases of pneumonia, where, from previous disease or general ill health, the patient's system is in such a depressed condition as to be unable to take on an acute inflammation characterized by arterial excitement, the use of digitalis, belladonna, and strychnine must be resorted to almost from the very first and without the preliminary employment of the cardiac sedatives. Never administer remedies because the patient has pneumonia. Pneumonia must run the course required by all the acute infectious diseases. Once thoroughly under way its course cannot be checked, and we can but guide the patient through the storm by supporting the circulation and respiration.

In The Therapeutic Gazette for December, 1892, the writer's former Resident Physician in St. Agnes' Hospital, Dr. Kelly, details a number of cases of pneumonia, all of which were successfully treated by this method; the treatment being varied chiefly in dose according to the condition of the circulation in each individual case. In previous terms of service equally good results have been obtained as in the term of service from which notes are now being taken.

Wet cups or leeches do much good in the early stages of acute sthenic pneumonia, but dry cups should be employed in the early stages of asthenic pneumonia.

The object of this paper will not be gained if the point is not emphasized that it is the condition of the patient that we must carefully consider, and that the physician cannot simply make a diagnosis of pneumonia and then administer remedies by "rule of thumb," but should use his judgment as to the condition of the vital functions.

The results which I have obtained in the treatment of a large number of cases of pneumonia in private and hospital patients during the last eight or nine years have been so good that I have frequently been inclined to look with doubt upon my diagnosis, and for this very reason I have been particularly careful in making the examination and in having my resident physicians carefully go over the cases in addition to my examination.

A New Aspirator.—Dr. W. S. Moore recently in the New York Medical Record reported a new aspirator, worked on a new principle. The vacuum, instead of being formed by pumping, was produced by absorption of ammonia gas. In order to understand its action it was only necessary to remember that ammonia gas is only one-half as heavy as atmospheric air, and that water will absorb about one thousand times its volume of ammonia gas—that is, one drachm of water will absorb a gallon of ammonia gas. The aspirator consisted of a glass vacuum vessel with an opening at the bottom, which could be closed at will by means of a stop-cock. There was also an opening at the top of the vessel, which was closed by a stopper through which passed a metallic branching tube. Attached to one of the branches was a small retort, or flask, which was suspended over an alcohol lamp, the lamp being held in place by a metallic band passing around the vessel. Attached to the other branch of the tube was the rubber tubing, with bulb, at the end of which was the aspirating needle.

Having described the instrument, Dr. Moore showed the mode of operating it. He placed in the flask a small quantity of aqua ammoniæ, stating that about two drachms was as much as was necessary. As soon as heat was applied, the gas immediately began to pass into the vacuum vessel. Being lighter than air, it remained at the top of the vessel, forcing the air out of the bottom opening. The instant that all the air had escaped, the operator was made aware of the fact by the odor of ammonia, which indicated that the vessel was now full of ammonia gas. The vessel was then sealed by turning the stop-cock, and the next thing was to absorb the gas in it, this being done by introducing a minute quantity of water into the vessel by means of the rubber hand-bulb.

It was soon seen that the vessel had entirely filled itself. The air having been expelled, Dr. Moore explained, there was nothing in the vessel to resist the inflowing fluid except the ammonia gas, and, since this gas is incapable of offering any resistance to the fluid, it necessarily followed that the suction-power was as great as possible. The good points of this instrument, he said, were: 1. It can be operated more quickly and easily than any other. 2. There are no valves to get out of order, or pistons to get dry. 3. It

is an aseptic instrument, as the ammonia gas acts as an antiseptic, and it has no crevices to prevent its being cleaned. 4. Its most important advantage is the perfectness of the vacuum, and, consequently, its superior suction-power. 5. Its cheapness.

In conclusion, he stated that with this apparatus a vacuum could be formed in a few seconds, if necessary, and the vacuum was as complete as could possibly be obtained. It was true that the suction was not stronger than in Dieulafoy's instrument, but the latter was much more expensive. The aspirator could be charged at one's office, so that when the bedside was reached there would be nothing to do but to turn the stop-cock.

In reply to a question, Dr. Moore said that the cost of the apparatus complete, with needles, was about ten dollars. Having been asked whether there was not danger of corrosion of the metallic tubes, he said that if the tubes were nickel-plated throughout, both inside and out, there would be no corrosion. But even without nickel-plating this was really no objection. It was only necessary to wash out the instrument promptly after using, as ammonia acts very slowly upon pure copper. The tubes in the instrument shown were nickel-plated only on the outside.

Stomachal Rest and Rectal Alimentation for the Obstinate Vomiting of Pregnancy.—An exhaustive paper upon this subject, by Dr. Robert A. Reid (Massachusetts Medical Journal, February, 1892), concludes with the following summary of principles:

(1) That in extreme cases of gravid nausea the stomach often becomes so disturbed in its functions as to render the digestion of food harmful, nay, even impossible. Hence arises a degree of exhaustion and inanition which may result in death. (2) That stomachal rest, which oftentimes must be absolute as far as a positive prohibition of all buccal ingestion can make it so, must be strictly enjoined; moreover, this may be, and often is, a condition precedent to therapeutical success in the management of cases where life is threatened. (3) That rectal feeding and medication become alike important factors in securing the necessary rest for the stomach, and indispensable ones in maintaining and improving the nutrition of the body. The demands of pregnancy are such as to require even greater nourishment than the non-gravid state; whereas, in the condition under discussion, the excessive vomiting reduces the supply far below the ordinary requirements of the system in the non-pregnant condition, whereby results inanition, exhaustion, and even death itself. (4) That the maintenance of nutrition by means of rectal feeding is in many cases at least, and I think to some extent in all, accomplished by a reversal of normal peristaltic action in the intestinal tube—the retrostalsis or intestinal inexhaustion of Campbell. (5) That by careful and systematic employment of feeding and medication through the rectum, the necessity for the artificial induction of abortion for the relief of gravid nausea may be reduced to a minimum. (6) And finally, that in cases which have resisted the employment of all milder expedients, and life still seems threatened, the induction of abortion for the relief of the excessive, obstinate, and uncontrollable vomiting of pregnancy becomes an alternative measure justifiable alike by medicine and morals.—*New York Medical Times*, December, 1892.

A Physiological Styptic.—According to the London correspondent of the Therapeutic Gazette, Dr. A. E. Wright's new styptic is the outcome of considerations on the factors which determine coagulation. It occurred to him that the best way of controlling hæmorrhage would be to imitate as closely as possible one of nature's own methods and produce natural coagulation in the blood. Now the addition of fibrin ferment to the blood is in itself sufficient to hasten its coagulation. We know, besides, that the coagulability of blood is dependent on the proportion of lime salts contained in it, blood absolutely deprived of these being uncoagulable. Combining these two ideas, Dr. Wright has prepared his styptic, which is a solution of fibrin ferment, together with one per cent. of calcium chloride. The efficiency of this solution, when applied to severe wounds in animals, is, as the writer has himself seen, very remarkable; a small quantity applied with a swab of cotton-wool being sufficient to almost immediately arrest the hæmorrhage, which is ordinarily very profuse. The solution is prepared as follows: The blood of cattle or sheep is received direct into about three times its volume of water, is set aside to gelatinize for a few moments, and then thoroughly whipped with twigs. The fibrin thus obtained is gently washed, so as to free it from blood pigment, and then extracted for about twenty-four hours with five to ten volumes of water. To the filtered extract is then added one per cent. of calcium chloride. The great advantage, besides its efficiency, is that the process of occlusion by a natural coagulum

is one which is calculated to do least harm to surrounding tissues. The action of the styptic is perfectly selective, being exerted on nothing but the blood with which it is brought in contact. No other styptic so thoroughly fulfills this condition.—*New York Medical Times*, January, 1893.

MECHANICAL TREATMENT OF CHRONIC RHEUMATISM.—Dr. C. O. Walbridge recommends mechanical means, including calisthenics, with its healthful exercise of body and limbs, to break up existing adhesions, to smooth the roughened articular cartilages, stregthen the contracted tendons and nerve tissues, and restore the joint to its former suppleness—first, by a process of stroking and kneading in a centripetal direction, stimulating the lymphatics and venous currents and surrounding tissues to greater activity, carrying the lymph with greater rapidity toward the center. By these means the lymphatics and circulating system are stimulated, setting up changes in the nutrition, causing healthy activity in the parts. In cases where there is perceptible defective nutrition, constitutional remedies with dietetic medication must be employed. The primary effects are upon the joints, muscles, and nerves. In the joints stiffness, adhesions, and contracted tendons are broken up and got into a proper condition for absorption. The secondary effects are produced upon the circulation and lymphatic system. The muscles and nerves are surely elongated, heat must necessarily be evolved by the manipulations changing the molecules of the muscles from an inactive to an active state, causing internal work, setting up molecular changes in all of the surrounding tissues. The waste material is carried away by increased action of the lymph and circulation, and new nourishment is more readily carried to all parts, feeding them and enlivening the whole organism.—*The Dietetic Gazette*, 1892, No. 9, p. 122.

TREATMENT OF SPRAINS BY MASSAGE.—To this well known mode of treatment Dr. Rosenblith has added some new variations which he describes as very successful, in a communication to the Société Médicale du XIIe Arrondissement de Paris. He does not make use of the elastic band, although he by no means underrates its usefulness.

What he particularly wants to show is that effusions of blood are very rapidly reabsorbed by massage. The injured articulation is at first immersed in very warm water, in order to dilate the superficial vessels. After this preparation of the affected region, massage should be practiced *outside* of the injured part. It is then gradually approached, and a very gentle stroking is applied to it at first. After that, more vigorous frictions are practiced.

Insensibility is thus gradually produced. When partially obtained, a more or less energetic *kneading* is practiced, according to the varying degree of sensibility experienced by the patient. To the massaged part is, finally, applied a compressive bandage, with wadding, which is wrapped in a flannel or linen band.

If the sprain occurs in the inferior limbs, the author, contrary to the ordinarily commended practice of avoiding movements for a shorter or longer period, advises the patient to walk as soon as he can do so without feeling great pain. According to the author, walking adapts the articular surface in a natural way, and actuates the venal and the lymphatic circulations by the muscular contraction.—*Merck's Bulletin*, Nov. 15, 1892.

A PLANT TO SUPPRESS MALARIA.—Dr. Brandes, a physician at Hitzackes, Hanover, has written an article in a German medical paper, in which he demonstrates the valuable properties of the *Anacharis alsinastrum*, a water plant which has hitherto been considered an unmitigated plague, choking up rivers, and altogether useless. Dr. Brandes has remarked that in the district where he lives, and where malaria and diarrhœa yearly appeared in a sporadic or epidemic form, these diseases have gradually decreased since the *Anacharis alsinastrum* began to infest the neighboring rivers and marshes, and since four years have totally disappeared. The above-named water plant nourishes itself on decayed vegetable matter, and grows with incredible rapidity. It thus destroys the germs which produce malaria and diarrhœa; and besides, its presence obliges the frequent cleansing of standing waters—a measure beneficial to health. Dr. Brandes therefore proposes that the experiment should be tried of planting the *Anacharis alsinastrum* in marshy districts. It is also useful in protecting the young fish, and affords an excellent dung. The plant came originally from Canada, whence it was brought to England, and thence to Germany about 1840. In North Germany it rapidly spread far and wide, and this year appears in all parts with unusual luxuriance.—*New York Medical Times*, January, 1893.

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Original Articles.

CLIMATIC INFLUENCES.*

BY P. C. REMONDINO, M.D.

The study and medical uses of climates, their action on the physical nature of man, their effect on civilization or in the formation of habits and customs, are by no means new subjects, either to the profession or to the laity. To the time of Hippocrates belong the first recorded instances of definite and rational observations in regard to these matters. To the founder of our rational system of medicine the influence of the air, locality, and the neighborhood of bodies of water, as well as the quality of the water used by man, were matters of importance; he was the first to notice that which has since been confirmed by Mitchell, by Michel, Buchan, and the modern observers, that it was the sudden transition from a low temperature to a warmer which produced catarrh and febrile as well as nervous disturbances. The knowledge of the benefits derived from a change of air, and that the climate of Egypt was beneficial to pulmonary diseases, were matters well understood by the Greeks. Long afterwards we find in Seelenham and Boerhaave a revival of the views of Hippocrates. In an old and interesting work on "Monaturals," Burton gives us an instructive account of the state of the weather and its relation to disease as observed by Sydenham and others—observations made valuable from the consecutive order of the investigations, which span over a period of fifty years. In these we observe practically the same relative results from climatic influences as were noticed by Hippocrates in ancient Greece, and which have also since been noted by Short, of London, and Frank and Marcet of Rennes, as well as by Bennett of Mentone.

In Burton's work we observe in the results that which the present Registrar-General asserts in regard to the greater healthfulness of those years with warm winters and a consecutive cool summer, and also that the season of rain has been by no means the season of disease. Somehow, most writers on climatology in its relation to medicine have neither kept the broad and rational path in which walked Hippocrates, nor have they allowed their deliberations and conclusions to be guided by the light of tangible and indisputable observations; they have chosen rather either to follow some theoretical guidance, or by attempting to confine and reduce climate to a series of dogmatic classifications they have thereby not only lost the fruits of their labor, but by the ensuing and naturally resulting confusion they have converted what should be a plain and easily understood subject into one of inextricable and labyrinthine chaos. Weber well observes that all attempts at classifying climates have resulted as disastrously as the various attempts to classify drugs. To this he might have added that the same attempts to reduce climates into classes have been as confusing as the attempts at producing in any form anything like a classification of diseases—something, by the way, that is well criticised by such eminent observers, thinkers, and workers in the facts of medicine as Albutt and Richardson.

What are the reasons that the discussion of climates generally has resulted in so much confusion? The preceding paragraphs in a manner pave the way for an answer. Most writers on the subject have undertaken to be systematic, totally ignoring the fact that if ever the superiority of the individualizing method over that of generalizing or classifying has found its exponent, it is in the subject of climate. There has also been, in a general way, a total neglect of consideration of what Angus Smith calls the chemistry of climate. There has been too much of an at-

* Paper read before the Milwaukee Medical Society. Oct. 27, 1891.

tempt to connect certain precise meteorological conditions with too precise pathological conditions, thereby commingling the confusion incident to a climatological classification with the delusive results that follow a like attempt at classification in the matter of diseases. As observed by Bennett, the North German or the Russian invalid arriving on the Riviera not only well exemplifies the general ignorance and misdirected efforts of the laity, but also shows the lack of advice on the part of the profession in these matters, as well as a total neglect of the important point which should occupy our attention, namely, the air that the invalid actually breathes. Most climatologists seem to cling to some empirical virtue possessed by the different meteorological factors. Some lay great stress on one element, others on some others; for instance, we have the partisans of the beneficial effects of high altitudes, who will tell you of the wonders of a rarefied air coupled with a diminished atmospheric pressure; they will cite you facts and conditions relating to the physique, the greater muscular vigor and general better health, developed on high altitudes, not forgetting to remind you that phthisis is rarely to be met with at this or that altitude. They take these facts as indisputable evidences that these high altitudes are the proper places to which pulmonary invalids should go; and will often, to fortify their position, bring a long array of cases that have been either at a standstill or have improved, utterly unmindful that the Tartars on the Kirgheez steppes, dwelling some hundred and more feet below sea level, the roaming nomad of the Colorado desert in Southern California, who wanders about on regions nearly 300 feet below the level of the sea, or the Arab in the valley of the Jordan, who is also a below-sea-level dweller, are one and all broad-chested and showing the most remarkable exemption from phthisis. On the Pacific Slope, from Cape St. Lucas, situated on latitude 23° north, for a distance of over 800 miles of sea coast, with the outlying islands that face its shores, there is no consumption. If we go another step and consult the records of the British Army, and compare the relative death rate from consumption between the Guards—where we certainly can claim to have the maximum of strong physique, good quarters, proper clothing, good diet, and the best of hygienic regulations and of medical attendance—and the sailor of the British fleets, we must certainly admit that the sailor—who is not only at sea level but constantly immersed in an atmosphere that is the reverse of mountain air in every other respect—enjoys a greater immunity from consumption than his fellow soldier.

The researches and conclusions based on the most reliable statistics made by Wilson and Boudin are very conclusive on this point. The labors of M. de Martinenq of the French Navy, are fully corroborative of the assertions of his English co-laborers in the same field. The irregularly fed and over-worked sailor of the commercial marine of Great Britain, living in the most unhygienic surroundings and not always leading the life of a Trappist monk, either as to sobriety or continence, also furnishes additional evidence in support of the fact that sea-level does not show any tendency towards the generation or cultivation and retention of tuberculosis, as the statistics show that this much abused, reckless, and ungodly portion of the British nation is not as prone to consumption as his more Christian brother who lives on shore and on the hill-sides. Evidence from Tchackrah, who many years ago wrote on the effects of trades and health, also goes to bear testimony that the fisherman and the fishmonger, always at sea-level and generally slopping wet, are not as subject to illness or to diseases as one would naturally expect them to be. From the above it must be plain that he who pins his faith on altitudes as a therapeutic factor must certainly have failed to grasp the subject in all its bearings, especially, at any rate, as far as consumption is concerned.

Here is another point that we must not overlook in considering the effects of altitudes on the human health, and the tendency of climatic factors to prolong life, this being the relative difference that exists in the mortality and the duration of life on high altitudes when compared to sea-level. Hufeland long ago pointed out the fact that islands were more noted for their examples of longevity than continents, and that mountainous regions were not as well noted for

the number of their specimens of extreme longevity. Since his time, official Government statistics have shown that in mountainous regions the infant mortality is excessive. A few prominent examples will serve to illustrate this proposition. Insular regions are, as a rule, low-lying; we will therefore take insular regions and low river-valley regions as one of the bases for comparison. These will show, when their infant mortality is contrasted with that of mountainous countries, that altitudes cannot claim any preference over sea-level as life-givers or life-preservatories. In using the term marine climate—which is synonymous with that of sea-level climate—it is done to show that the additional elements that enter into the composition of marine air—the accentuation of a sea-level atmosphere—cannot in any way practically be considered as injurious to health or to life. Beginning with the British Isles, we find that in the purely insular localities (the Shetlands, Orkneys, and Hebrides), where the marine climate is at its maximum, the death rate is 8.05; on the mainland (country districts), 9.80; and in the cities, a rate of 14.91; while in Switzerland the rate is 18.79. In Ireland, with its insular climate, it is only 9.59. In France there is further evidence of the increased mortality due to the variability of mountain regions, and confirmatory of the general proposition that the nearer the approach to perfect equability the more is health and long life made secure. Villerme and Edwards—in which they are confirmed by Dr. Lombard, of Geneva, in the main points—have observed the great mortality during the period under discussion, and have erroneously ascribed it to cold alone. For the whole of France the mortality under one year is 16.80, while that of Alsace-Lorraine is 21.27. Now here is an interesting study: In the rest of France we have its great extent of sea-board, its great river valleys—of the Rhone, the Loire, and the Seine—where the large cities with their great civic infant rate (in Paris on the Seine it is 39.07) are to be found. In these localities many which are puny and of poor stamina survive to propagate a weakly offspring; whereas, in the mountainous regions, as observed by Bennett, such infants are nearly sure to succumb, thereby leaving only a strong propagating element. From this it naturally follows that a weaker infant stamina exists on the coast and in the river valleys, and more robust and healthy stamina is inherited in the mountains; and yet, with all this in favor of the mountain-born infant, there is his greater mortality to be accounted for. When his robust ancestry, better quality of food, and purer air are all considered, the mountain-bred infant should outlive his more unfortunate young countryman on the lower levels or sea-boards—but the reverse is the fact.

One cause of this excess of mortality in France has been partly explained by Edwards, who accuses cold as being the cause. I do not agree with him on this. Infants born in the south of France, Italy, and Spain, followed the grand army in its invasion of Russia in 1812, and many returned alive through all the exposures and horrors of the retreat. Children are born under the greatest degree of exposure to cold in Northern regions, as I have seen among the Indians in the Northwest, and live and thrive. The Esquimau child is often born in an ice hut with a very low temperature; so that mere cold cannot be said to be the cause of infant mortality.

In England it has been found that during the first month of life one child in twenty-one dies, whereas in France it is one to fourteen. Investigation has shown that the excess of this French mortality was in winter, and greater in the north or mountain districts. Villerme and Edwards undertook to explain this by the custom of civil registration and religious baptism, which exposed the tender infant at this period to cold. Admitting that the cold, damp church, with its filthy ferments and excess of carbonic acid in its atmosphere, and the musty, foul air of the Mayor's office, unventilated and close as it necessarily is in the northern provinces, must have a morbific effect on the vital organism of the infant, I cannot see where mere cold can be made either a primary or a determining cause of this mortality, unless it be in the sense of an extreme condition from the heated apartment to which it is returned after these ceremonies—rooms overheated from a mistaken idea of parental solicitude (more so than usual, simply because the child

has been out in the cold). The real cause of the mortality lies simply in the vitality, the depressing influence of the foul, miasmatic air in the public places, and in the extreme variability of temperatures to which the child is subjected; cold, by itself, or the condition in which it is encountered in the open air, being in reality the most friendly to the infant of all the conditions.

The "Statistics of the Kingdom of Bavaria" give to that kingdom a mortality of 34.04. Bavaria, to the east and north, has its Alps and mountains, and is situated in the very centre of Europe, away from any oceanic influence. Spain, a high and mountainous country, with its population at higher elevations than that inhabited by the masses in France, has a mortality of 18.61. European Russia, with its continental climate, has a rate of 26.68; while in some portions of the empire the winter mortality among those under one year reaches the great ratio of 69.1. The Russian climate is one of extreme range; at Yakutsk, 300 miles south of the Arctic circle, the winter temperature reaches — 58° and that of summer 99°, a range of 157° for the year. The great variability of climate, and the utter impracticability of ventilation among the poorer class in such a country during the extreme cold of winter, show their effects in this great mortality, which in summer—ventilation being more practicable—drops down to 31.6 per cent.

From this view of the case, and from the effects of altitudes on infant mortality, and the indisputable evidence of the longevity that is reached at low elevations, we must certainly conclude that, as a climatic or as a demographic beneficent factor, altitude is something that we can dispense with. There are, nevertheless, altitudes, and even very extreme altitudes, where we find an exceptional state of health, low infant mortality, and cases of extreme longevity. For instance, on the plain of Anahuac, 6,000 feet in elevation, according to Jourdanet, there is no phthisis, but there we have not the same muscular development that is found some 2,000 feet lower down. Pneumonia and hepatic troubles are quite rife on the plain of Anahuac; there also exists a pernicious anæmia there that is undermining to the constitution, and which enters into all the endemic, accidental, or epidemic diseases as a serious disturbing factor. We are told that a descent to the lower levels will soon cause the anæmia to disappear; and that various annoying gastric and intestinal difficulties which are common on the plain, as well as the inveterate neurotic dyspepsias which in their organic disturbances at times even create on the sensations and in the mind of their unfortunate possessor suspicions of cancer or some other as fearful conditions, also disappear on reaching the sea-level, without any further interference on the part of medicine. Is altitude responsible for this condition of affairs? It can hardly be said to be altitude alone that produces what there is of either good or evil in these regards. Altitude does affect man in certain regular ways when man labors under some special form of organic heart disturbance or disease; but that it does not alone have these indiscriminate and promiscuous effects is equally certain. There is a local cause for all these effects, or, as I should more properly say, a series of causes, which we do not as yet fully comprehend. The fact that these physical derangements appear and disappear as we ascend or descend an altitude would seem to warrant the belief that altitude is the real and only factor; but in villages some 2,000 feet above the Anahuac plain we again find a stronger muscular physique and a total absence of all the neuroses found on the plain below. At El Guarda, some twelve leagues from the City of Mexico, which is situated on the plains of Anahuac, and at an elevation of 2,000 feet higher than the latter city, not only is the conspicuous and pernicious anæmia absent, but of such ruddy color are the cheeks of its inhabitants, and so healthy is their complexion, that when any of them descend to the sea-side at Vera Cruz they are nicknamed "Huachinangos," the latter term being the name of a bright red fish that abounds in the sea at that locality—as the El Guardans so much exceed in the ruddy glow of health even the Vera Cruzans, and their appearance offers a striking contrast when compared to the appearance of all other Mexicans. The cause that produces this rich blood and ruddy health, it is evident, must have some purely local factor, and is something which strongly

forces itself upon our consideration. It is evident that in speaking of climate as a pathological or a therapeutic agent or factor, we should not drop into the too much followed rule of ascribing all results to one or even two factors, however prominent these may be. The determining factor or factors may pertain to habit, custom, or diet, or may even be due to social, political, or religious causes, and only remotely climatic.

With the rapid changes that science, invention, and progress are making, the hygienist, the sanitarian, and the physician feel that they must not only study books which soon are out of date, but that, in order to well understand causes and conditions, they must study the past and actively keep abreast of the present. There are old and valuable truths which are too apt to be covered with the theoretical and technical rubbish of the present; and civilization is continually changing the type of diseases or making a change in the classes whom they attack. For instance, the butcher class were in even my own memory still the same class as described by Tchackrah, and which were said by Tweedie never to furnish a case to the fever hospital. The butcher escaped epidemic and acute diseases, infection, and other ills, and then was only liable to go off on a sudden when past fifty with any of the diseases resulting from plethora; his life was one long span of ruddy health, with no organic or accidental disease to annoy or endanger it. He formerly walked through life with exuberant health, suddenly to disappear over the brink after a very short illness. Now, however, the introduction of the cold-storage room is proving a destruction to the class—as the discovery of the needle gun was to the Austrian at Sadowa—and, strange as it may seem, they are surprised at being suddenly stricken, as the savage islanders were at the effects of the bullets from Robinson Crusoe's gun. Sudden kidney and pulmonary congestions, with either a quick fatal result or a slow and tedious journey to the grave through chronic affections of those organs and of the heart, are now quite common with their class. The sudden chilling now offsets all the former benefits that the class derived from the free ventilation they enjoyed and the rich and easily assimilated foods on which they fed. Life insurance companies have not yet had their attention called to these results, but I consider the butcher to-day who is in and out of his cold-storage room a more hazardous risk than a locomotive engineer or an employé in a powder mill. Large hotels, which from isolation from market supplies are also obliged to depend on cold-storage rooms for the preservation of their meats, also expose a part of their employés to the same dangers. I have seen several quickly ending fatal cases both in hotel stewards and butchers from these causes, and have given advice in many more like cases that originated from the same cause. Ice-men, who deliver large blocks of ice by carrying the block on their backs, run risks that they little dream of, by the sudden chilling that the dorsal and lumbar region undergoes. I have more than once seen serious rheumatic troubles induced by the habit, and have seen not a few permanently crippled with kidney and subsequent heart trouble through the same cause.

These digressions are only made for the purpose of showing the absolute necessity of studying into all possible factors, and the need which a physician continually has of culling knowledge from all sources and of feeling that all inventions, all progress, all changes, be they commercial, social, religious, political, or in the arts, trades, and callings, are all things that affect the ills he is called upon to combat, and that the ætiology of disease is continually changing. This teaches us that text-books are good, but their perusal without a continued keeping abreast of the times in all knowledge will be of little service to us.

Returning from these digressions, we will resume the study of the subject of altitudes and the errors that are common in this connection. Hirsch, after a patient investigation of the subject of phthisis in conjunction with that of elevation, has been induced to even drop the question of density of population as a possible factor in the production of the disease. By this I mean density of population *per se*, as he noticed that it was ventilation, and neither less density of population nor a high altitude, that exempted man from

phthisis. These conclusions were drawn from observations made in German manufacturing towns situated at various elevations, facility for thorough ventilation being as a rule the most important element as a disease-preventive factor. The data of the Swiss Statistical Bureau, and the work of Dr. Emil Muller on the distribution of phthisis in Switzerland, give us some interesting facts for consideration, which fully bear out the conclusion reached by Hirsch, namely: That altitudes only exempt from consumption in proportion as they may allow of a free ventilation, and that in proportion as this is impeded —no matter what the elevation or altitude— phthisis is again found to flourish.

The following from Muller will fully exemplify and make clear the above: In one of his tables we find the rate of mortality from phthisis among the industrial and the agricultural classes. The industrial class comprises occupations entailing confinement in the workshop or at home:

ALTITUDE FROM 3,000 TO 3,400 FEET.

Industrial	6.5 per cent.
Mixed	6.1 " "
Agricultural	3.5 " "

ALTITUDE FROM 3,400 FEET TO 4,400 FEET.

Industrial	9.8 per cent.
Mixed	7.5 " "
Agricultural	5.0 " "

Above the elevation of 4,400 feet the purely industrial class does not occur, but there is a class following a partly industrial and partly agricultural life, among whom, up to an altitude of 5,000 feet, there is a mortality from phthisis of 7.7 per cent. Above 5,000 feet the population is very sparse and wholly pastoral and agricultural, deaths from phthisis still occurring, the rate being 4 per cent. of the mortality. Sedentary occupations require artificial warmth in cold weather. In regions where the cold of winter is extreme—a condition inseparable from altitude in the temperate zone—houses or factories are built with an eye to including all the warmth and excluding all the cold air; the higher the altitude, and the colder the winter weather, the more imperative this object becomes, and the more impracticable is ventilation, the true safeguard against phthisis; hence the danger and death rate from phthisis at high altitudes. And to this same cause may be attributed the prevalence of phthisis in the mountains of Norway and Sweden.

The question of altitude has been too arbitrarily settled in its favor with regard to phthisis, without due regard to any discriminating conditions. Latitude does here exercise a decided influence, which is generally overlooked; an altitude under the equator or within the tropics, and an altitude on the 40th degree of latitude, are two entirely different conditions, and more so in their effects. On the St. Bernard, at an elevation of 8,000 feet, stands the monastery, the highest inhabited spot in Europe, being on the 46th degree of latitude. Arctic weather here prevails, and here is to be found the shortest-lived of any of the monastic orders. The climate, although polar, gives to the poor monks none of the immunities enjoyed by the dweller in the Arctic circle; their terms of office or service are short, and those who escape pneumonia generally fall victims to phthisis later on. At Bogota, on the contrary, nearly under the equator and at an altitude of 9,000 feet, the mean winter temperature is 59° and that of spring and summer 59.5°, and phthisis or pneumonia is unknown. All of the altitudes to which reference is made, from those of Anahuac down, as affording immunity from phthisis, will also be found within the tropics, where equability and not altitude is the real factor.

It is this equability, allied to pure mountain air, free ventilation, and outdoor life, that gives to Jauja in Peru its great immunity from and curative powers over phthisis, 79½ per cent. of the cases going there being said to be cured. Here the temperature never varies from between 50° and 60°. Arequipa, also in Peru, and at an altitude of 8,000 feet, enjoys a like climate and a reputation for health. The causes of this immunity, and the effects of these tropical altitudes, are nowise applicable to altitudes of the temperate zone, where a condition as different as in the height of their snow-line exists as regards pulmonary diseases. Leadville in Colorado, with its extremes of temperature, and a like elevation in Peru with its equability, give an entirely different ratio for acute pulmonary attacks and their results.

Hirsch, in connection with this subject,

enumerates seven cities of from fifty thousand to three hundred thousand inhabitants, which are situated at high elevations on the plateaus of the tropical and semi-tropical ranges of the Andes mountains in America, in a country where the people never close their doors and when chilly do not make themselves neurotic over a hot stove and in a close room. When chilly weather or chilly hours come on, they simply put on more wraps, unconsciously realizing that it is the body surface that requires warmth, and not the air-cells of the lungs, which thrive better on pure air even when that air is cold.

If sea-level air were inferior to that of high altitudes, we would not have the assertions of Turner and Gihon of the United States Navy, of Boudin and Wilson in regard to the navies of England and of France, or of Fonssangrives and of Martinenq of the French Navy—all based on careful and practical observations—all going to prove that the sea-level marine air furnishes a most decided immunity from consumption. As before observed, it is not a question of altitude or sea-level so much as of that which Augus Smith would call the quality of the air which is breathed. C. T. Williams really gives us the subject in a nutshell when he observes: "An invalid seated on the deck of a fine clipper-built ship in a southern latitude—say 27° south latitude—is placed under some of the best hygienic conditions possible. He breathes the purest of air, experiences at any rate one form of passive exercise without fatigue or fear of chill; he is supplied plentifully with good food in fair variety, for which he has an appetite outstripping even the continued succession of meals. But when he retires to his cabin, and if he should be confined to it by bad weather or illness, the conditions are surely somewhat changed; he has to live in what in his own house would be considered a cupboard, and but a poorly ventilated one, especially when dirty weather requires the portholes to be closed." The first set of conditions above enumerated by Williams favors in every way the power of tissue change, but in the closed cabin we see all the conditions that weaken that power and interfere with its activity. The first of these can be obtained at almost any point in the region where constant equability prevails, be it on the high plateaus of the Andes of Colombia or Peru, or at sea-level at Orotava in the Canaries, or on the shores of California; whilst the victim of American nervousness, as described by Beard as being over-sensitive to anything but an over-heated air, and not having been accustomed either to harden his body by the daily sponge-bath of the Englishman or the body-oiling of the African, nor used to sit wrapped in a poncho like a South American, will continually put himself in the latter condition described by Williams. Bennett has observed this on the Riviera in regard to the German and Russian, and I have observed it every winter on the Southern Californian coast, where I have often been obliged to remark to patients that they might as well have remained at home, for, although it was true that they certainly had California air on the outside of the house, the atmosphere in which they were continually immersed was the same as that in which they had lived in their rooms at home.

A climate is beneficial just in proportion as it will admit of, and the patient will experience, a free and unimpeded ventilation. This is more practicable on the sea-board, by reason of its greater equability; and, as before observed, when no heart or kidney complications exist to contra-indicate an altitude, if these conditions can there be obtained to as great a degree, there is no reason why altitude should not be as beneficial. Outside of the above questions I cannot see where lessened atmospheric pressure can be to the general consumptive of any special benefit.

The greatest importance has been attached to the question of atmospheric humidity and to rainfall. I have often been asked, "What is the relative humidity of your city?" or, "Have you fogs out there?" or, "How much rain have you?" I have yet to see where any resulting good can come from this knowledge. Dry air, it has been claimed, will prevent phthisis and invigorate the system, and the relative dryness of the air has often been believed to be a sure sign of its beneficent therapeutic effect—perfectly regardless of the fact that the southwest of Ireland, where it rains almost constantly, and the high

East Indian hills, where the rains fall as in the days of the flood, and the Cajon Pass on the northern boundaries of Southern California, where the fall may reach 25 inches in the course of the twenty-four hours, and the coasts of Brittany, where the people are in either a mist or a rain, like the Scotch and the inhabitants of the outlying islands of Scotland, are all regions as exempt from phthisis as India or the Colorado desert, where fog never gathers and the total rainfall for twelve months may not reach an inch in quantity, and other equally rainless and fogless regions. A perusal of most of our works touching on this subject will convince us that the writers have paid very little attention to the knowledge to be derived from a careful study of Angus Smith's instructive work on "Air and Rain," neither have they looked at the subject in anything like a general and comprehensive manner. Much stress has unnecessarily been laid on the relative humidity of the air and the influence of rainy weather in their relation to the phthisical. Facts do not bear out the fears with which these two conditions have been regarded. J. Henry Bennet observes that rainy weather is not injurious to health if the temperature is not below 55° or above 65°. It has been observed that seasons of great rain are, as a rule, healthy. Dr. Port, of London, found that at Mentone on the Riviera during the rainy winter and spring of 1878–79—with fully half the days rainy and with an unusually low temperature—the phthisical patient did better than at any other season.* Drs. Frank and Marcet, of Cannes, during the same season experienced the same weather with the same desirable results. Bogota, in South America, already mentioned, also favors this opinion as to the effect of rainfall. One strange example is given by Watson—that of three hundred women engaged in dredging coal, wading all day in the sea, escaping an epidemic of influenza at Newcastle. All these conditions were perfectly consistent with constant, moderately low equability of temperature.

The explanation of the above is simply that invalids do better in an equable, moderately low temperature. Sudden changes of great ranges of temperature are impossible during the prevalence of moisture or rainy weather coming constantly from off the sea—the coast climate being, for the time being, converted into an insular type of climate, with a total displacement of all land influences. It is only during the bright and dry weather that the shores of the Mediterranean are subject to any considerable variations of temperature and to chilly winds, when the land has displaced the marine climate. I do not place the stress that is usually laid on the amount of rainfall or atmospheric humidity as being injurious to consumptives; and I do not think that, where the soil affords good surface drainage and the temperature is moderately low, fifty or a hundred inches more or less of rain make any difference, provided it does not by its violence or winds interfere with the proper ventilation of the houses. Pau has a rainfall of forty-three inches, Madeira of thirty; at Nice it is twenty-five inches, and at Algeria it is thirty-six inches. At Bogota, in the States of Colombia, near the equator—one of the most charming climates in the world, and one where phthisis is practically a stranger, where many consumptives go for climatic cure—there is an annual rainfall of seventy-four inches. The temperature there has a summer mean of 59.5° F., and there is undoubtedly good drainage. In the Southern California climate there is at times—especially if the day has been a little warmer than usual—a heavy bank of fog that moves inland from the sea. The fog is neither cold nor chilling, nor has it the depressing influence of the relaxing atmospheric moisture of the tropics; it is more in its effects like the mists of Scotland than anything else—and I take it that the Scotch and Irish who come from the western misty and rainy coasts of their respective countries do not certainly bear any evidences that either rain or mists are debilitating. Lombard, writing in the early half of this century, pointed out the fact that occupations that were considered unhealthy by the unavoidable association of great moisture in the air were precisely those which furnished the least quota of consumption. If fogs are so injurious, what must happen to those amphibious tribes (like the many island sav-

* Ziemssen, "Hand-book of Therapeutics," vol. vi.

ages) who spend most of their time paddling about on the water? or what should become of the Newfoundland fisherman, who is hardly ever out of fogs, and of the Icelander, who, singularly enough, is not given to consumption?

In the fogs of the Pacific coast the fishermen continue curing their fish on their racks along the sea-shore; the meat in the fish being of good thickness, and in the case of the abalone, which is also dried for export in the same manner, it is much firmer and thicker. I have seen beef cut into strips, being cured during the spring along the coast, fully exposed to this night-fog without any detriment. It is only a marine humidity at best, and, unlike the fog of many of the Mediterranean islands, it is devoid of any miasmatic emanation; neither does it exercise in the least any deleterious effects on any organic matter subjected to its influence. How little a like meteorological condition produces like effects may be judged by a comparison of the climate of San Diego, Cal., with that of Funchal, in the island of Madeira. Both have about the same annual temperature and the same position as to latitude, Madeira having a little more relative humidity and more rain (although the former is often equaled at San Diego); but from its easily drained soil, both from its nature and incline, rain-water cannot add much to the humidity either of the air or soil, as it must rush down to the sea about as fast as it falls. Yet we are told that it is almost impossible to preserve botanical specimens, keep musical instruments in tune, or leather articles from moulding, in that climate; surgical instruments and books are soon ruined; deliquescent powders cannot be kept.* At San Diego, where the relative humidity may average 90 per cent. at times, as it did at the morning-hour observation for September, 1887; or at Los Angeles, where for the same observation we have 90 for February and April, and 92 for June and September, 93 for August, and 95 for July; with all this humidity, they cure the raisins in the open fields, as well as other kinds of fruit; and sea mosses, dripping with sea water, as well as the ferns of the valleys or the flowers of the hills, are only pressed, to dry without any further trouble into beautiful specimens. During the rainiest weather nothing moulds or rots, and in no climate is the salt-cellar so poor a hygrometer.

Briggs, the best authority on atmospheric moistures, assigns 70 per cent. as the relative humidity best consistent with health for the United States;† the average relative humidity the world over being, according to Levy, 72. Extremely dry air is injurious from its unavoidable association with extreme variability. In the Sahara the Arabs observe great precaution against rheumatism, and heavy woolen garments are worn as a protection. Prof. Jean Vilain, of Paris, gives some interesting facts relative to the action of the extremely dry, as well as extremely variable, atmosphere of the Sahara desert on the lungs of its native inhabitants, which also somewhat disturbs our preconceived ideas of the relative health of domesticated and wild animals. Whilst serving as a surgeon to his regiment in Algeria, he dissected the carcases of fifty lions. Of these he found twenty with diseased lungs, of which fully one-half had but a small remnant of lung left, showing the prevalence of phthisis in the dry air of the Sahara and Sahel deserts. At the Jardin des Plantes in Paris seven lions died in 1869 (written in 1879), all born in Paris. He dissected them and found their lungs perfectly healthy.‡ Desert air has one per cent. more oxygen in its composition than the air of the Nile valley, and does not exhibit a trace of carbonic acid or any mephitic gases; not a favorable air for microbes or the ubiquitous bacillus. The atmosphere is exposed to sufficient sunshine at all times to render it free from germs.

Here we have an atmosphere aseptic to an extreme degree, and nothing detrimental in its composition, chemically, bacillary, or hygrometrically, to account for the phthisical occurrence, except it be the extreme variability of temperature between day and night, the range in winter at times reaching 100°. Interference with proper nutrition, by the unavoidable irregularity of meals, incidental to a wild lion's life on the desert, may be an

* L. Gigot-Suard, "Climates in their Hygienic and Therapeutic Relations," Paris, 1862.

† Turner in Hygienic and Medical Reports for 1879.

‡ Popular Science Monthly, November, 1879.

additional cause, but it is not such a morbific cause as the irregularity of temperature; the piercing cold of the dry air of the night being more deadly when on the heels of an extremely hot day.

At Cairo, with an atmosphere whose humidity runs up as high as 80, during twelve years, out of a total of 26,300 cases treated at the medical school, there were only 18 of phthisis and 22 of pneumonia.*

Neither great warmth nor extreme cold is necessary for good health, or for the recovery from any disease. The Canadian winters, as well as those of Minnesota, have often proved beneficial to consumptives, not so much from the transient quality or great degree of cold as from its constancy and the out-of-door life that can be followed so much better there than where it is slushy and thawy with alternations of spells of freezing.

If we accept the views of Beard, as well as of others who have carefully inquired into the causes of our American nervousness, we must admit that the variability and extreme ranges of temperature—made possible by the natural dryness of the air that comes from the vast region of arid plains in the west—are the great factors of many of our neuroses, not a few of which pave the way for phthisis. Europe, especially in the south and extreme west, owes the great longevity, sturdy physique, and health of its inhabitants to the great equability of temperature made possible by its low elevations and the great moisture of the atmosphere. Where the conditions are such as to antagonize equability, either by altitude or continental dryness, we have, as we have seen in Spain, Switzerland, and on the Bavarian Alps, a surprising infant mortality; and as what a climate will do for an infant it will do for the aged, we need not look for very old age in these regions—a fact that has been pointed out in regard to Germany by Hufeland, who remarked that, although Germany had many old people, her very aged ones were numerically and proportionately far below those of the British Isles. Equability secures free ventilation, which allows man to live nearly the out-of-door life of the nomad, who knows neither neuroses nor consumption.

San Diego, Cal.

*"Climate of Egypt," by Prince Ignaze Zagiell.

FOREIGN BODIES IN THE AIR-PASSAGES, WITH REPORT OF A CASE.

BY EDWARD WALSH, M.D.

A thorough knowledge of this subject is important to the general practitioner as well as the surgeon, because it is the family physician who is first called upon to treat these cases; and to delay active treatment until the aid of a specialist can be procured may be dangerous to the life of the patient.

Again, although an operation may not seem necessary at the time, the physician should be conversant enough with the prognosis to appreciate the necessity of the early removal of the foreign body. To allow it to remain in the air-passages is to subject the patient to the danger of a sudden death, or, if not this extreme, its presence is liable to give rise to serious results, such as traumatic inflammation, abscess, pneumonia, etc.

Foreign bodies gain access into the air-passages in different ways. The most frequent source is by sudden inspiration, accidental or otherwise, while food or other substances are in the mouth. They may also gain entrance by direct penetration of the air-tube, as in the case reported by La Martiniere, in which a pin from a whip-cord had entered the trachea. About a year ago I saw a case, in consultation with Dr. J. Hally, in which a splinter had penetrated the trachea just below the cricoid cartilage.

The variety of objects which may produce this accident are legion, the most common of which are, according to Weist, beans or grains of corn. Among others may be mentioned pins, needles, buttons; fragments of teeth during extraction; vomited matter; pus from neighboring abscesses; blood from pulmonary hæmorrhages; and necrosed bone. Also the epiglottis may be impacted into the upper orifice of the larynx, and act as a foreign body. The natural tendency of children to put their playthings in the mouth, gives rise to many cases.

Foreign bodies may remain loosely imprisoned, or they may become impacted. On account of the bifurcation of the bronchi to the left of the median line, the body is more apt to lodge in the right than in the left bronchus, especially as the former is the more capacious.

When a substance gains access to the air-

tubes, the usual symptoms are: A sudden paroxysm of pain; sense of suffocation; violent respiratory efforts; lividity of countenance; possibly vomiting and discharge of bloody mucus from the mouth.

When the patient is fortunate enough to eject the substance by his own efforts, relief generally follows. If the initial paroxysm does not prove fatal, the marked symptoms may, after lasting from a few minutes to a few hours, pass away, but are apt to recur at any time. In some cases no manifest symptoms are noticed for an indefinite period; in fact, the patient may cease to remember the circumstance until suddenly the symptoms are reproduced, probably due to a change in the location of the foreign body.

Sometimes all signs of pulmonary disease disappear after the removal of a foreign body from the air-passages.

In adults the diagnosis in most cases is easily made, as the history is indicative of the trouble; while in children it is often difficult because no history is given. But when a child who is apparently in good health is taken suddenly with dyspnœa, cough, distressing cries, the face becoming cyanotic, the eyeballs projecting, and partial loss of consciousness coming on, it is pretty strong evidence that the lumen of the air-tube is obstructed.

Laryngoscopic examination may reveal the body if it be lodged in the upper trachea; but when the symptoms are marked and violent, such an examination is impossible, and in children, even under anæsthesia, it usually reveals nothing.

The prognosis is always grave while the foreign body remains; therefore the expectant treatment should not be thought of, except in rare instances. The only practical treatment is the extraction of the foreign substance by the use of the laryngeal forceps, through the mouth if possible, or through an incision into the trachea or larynx. All such measures as emesis and inversion have been found to be of little value and often dangerous. In urgent cases the patient is best relieved by tracheotomy.

This operation is not devoid of danger, and to the inexperienced may prove a difficult undertaking—indeed, both Gross and Billroth have said that tracheotomy was the hardest operation they ever performed; therefore it is advisable to secure the assistance of an experienced surgeon. When this is not possible, the attendant had better make the effort himself when death seems imminent.

Case: On Dec. 7th, was called in consultation with Dr. John Walsh to see Master B——, aged 6. I learned that the child, while playing on the floor, was suddenly seized with a fit of coughing, difficult breathing, and vomiting. This paroxysm soon subsided, but in a few minutes returned with increased severity. The child's face was cyanotic, and he was rapidly becoming asphyxiated. A hasty examination of the throat revealed nothing. We concluded that some substance was obstructing the air-passages, and advised an immediate operation, which was consented to.

It was decided to perform low tracheotomy. The head being steadied, an incision was made from the cricoid cartilage close to the sternum, first grasping the trachea with the thumb and forefinger of the left hand, pushing back all neighboring structures. Rapidly dissecting down, avoiding the vessels and pushing up the isthmus, the trachea came into view and was seized on one side of the median line by a tenaculum. Three rings were incised, and the tracheal forceps introduced downwards. After passing in about an inch, a click was heard, and by a little manipulation the foreign body was extracted, proving to be a shoe-button. My assistant now resorted to artificial respiration, and the child was soon breathing normally. He made a good recovery.

Probably the button not only impeded the respiration by obstruction of the lumen, but also produced a spasm of the glottis by reflex action.

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THERAPEUTICS OF THE ENDOMETRIUM.

BY ISAAC LAFAYETTE WATKINS, M.D.

The order in which I propose to discuss this subject is: The location of the organ; the method of reaching it with remedies, both by local and general treatment; and the remedies in popular use at the present day.

It must not be forgotten that no other

subject probably in medicine is as imperfectly understood as the one before us. The assiduity with which gynæcologists pursue the novel idea concerning the physiology of the female organs, proves the truth of this assertion. We cannot expect to give anything like an invariable rule for the guidance of the novice in gynæcology.

By endometrium we mean the lining membrane of the cervix, uterus, and fallopian tubes. Anatomically speaking, this is not correct, since the most recent anatomists say the mucous lining of the cervical canal is thicker than that of the body; it is firm, fibrous, and covered with ciliated epithelium. The mucous membrane of the body is filled with glands of the tubular variety, which penetrate through its entire thickness. Mr. Leopold regards it as a lymphatic surface which contains no special lymphatic vessels, but consists of lymph sinuses covered with endothelium. It is this part of the uterine mucosa which is thrown off during menstruation. The lining membrane of the cervix, being a granular organ, and therefore secretive in its functions, takes no part in menstruation. The surface of this membrane (the endometrium), says Jacobi, is covered with blood during menstruation. The pathology of this organ is without a parallel in the human body, owing to its peculiar functions. During the thirteen years of quiet life it is rudimentary and plays but an insignificant part. At puberty its functions begin, and with them great suffering to a large number of women.

The endometrium is frequently attacked by benign and malignant disease. It is often difficult to determine as to the character of the vegetations of this membrane—whether they are benign or malignant. Nor is it always easy to say just where acute inflammation ends and chronic inflammation begins. However imperfect our knowledge may be of the different conditions, it is necessary to have some classification of these pathological changes.

Schmidt enumerates the growths that may be found: "Chroni-hyperplasia, lymphosarcomatous growths, myxomatous growths, sarcomatous growths, adenomatous growths, papillomatous and carcinomatous growths."

That acute inflammation is frequently met, is seriously questioned by some authorities, although a majority hold that it is very common. It is sometimes traumatic, as when produced by the curette or the sound. Incision of the cervix for stenosis, or intrauterine injections, are frequent causes. The extension of inflammatory diseases of the vagina, exanthematous fevers, retained material in the uterus, are not infrequently the cause of endometritis.

Chronic endometritis is a very common disease. It is frequently referred to as chronic uterine catarrh or leucorrhœa. In this Southern country we are consulted for this condition more than for any other one trouble. It is divided, by most writers on the subject, into corporeal endometritis and cervical endometritis. This division is incorrect so far as it pertains to the cervix. It is very frequently designated as cervical catarrh, sometimes endocervicitis. Without entering into the merits or demerits of either of these names, I shall leave to your discretion the selection of the most appropriate.

Syphilitic ulceration is a condition much more frequently met than is recognized. Many of the so-called cancers of this organ are nothing more than a syphilitic ulceration. In many advanced cases it is impossible to make the differential diagnosis without the microscope. I saw such a case in consultation with friends a short time ago. Uterine fungosities so frequently met with are the result of some one of the conditions mentioned above.

In 1885 Mary P. Jacobi obtained opinions of forty-five contemporary authorities in regard to the propriety and value of intrauterine medication. Of these, forty were expressed in favor of it and five against it. In 1887, twenty-four opinions were expressed publicly on the same subject; eighteen were favorable and six in opposition. Among the six were Drs. Emmet and Thomas, of New York. If we shall regard these statistics as correct, and consider the high authority on the negative side, we can but acknowledge that local treatment is growing less popular. This difference of opinion is due to the idea that applications to the endometrium were not without danger, and that the endometrium was not the seat of disease. Dr. Emmet referred all inflammatory changes

to the uterine adnexa, and Dr. Thomas to flexion or version of the uterus. These differences will exist just so long as the physiology of the female organs of generation remains in such obscurity.

The same difficulty combats us when we try to determine the frequency of disease of this membrane; some regarding all intra-uterine inflammations as secondary to peri-uterine inflammations (cellulitis, Emmet) or mechanical condition (as displacements, Thomas), and others regarding disease of the endometrium as a trifling affair. A third class of false teachers, of whom I will speak, and who are equally antagonistic to the progress of science, are those who concentrate all their attention on the endometrium, and overlook the morbid condition of the ovaries and tubes, peri-uterine-peritoneum and connective tissue, which is much more important.

In a series of articles by Mary P. Jacobi on this subject in the American Journal of Obstetrics, she divides the physiological functions of the utero-ovarian system into three cycles—the menstrual, the parturient, and the reproductive cycles—which begin at puberty and end with the menopause. Based on this knowledge, she gives a detailed account of the immediate effects of applications to the endometrium.

She regards local treatment as essentially surgical. There is really very little difference between the caustic and curette in fungous endometritis. Superficial diseased tissues of the mucous membrane in both instances are partially destroyed, to be replaced again at the next menstrual period with healthy membrane.

Remedies in popular use are legion: the zinc preparations, nitrate of silver, tannic acid, boracic acid, salicylic acid, iodoform and iodoform gauze, the dull and sharp curette, and electricity. All of these agents have their advocates. In making a selection from this list, owing to an unnecessary timidity some recommend that we begin with the milder remedies and first establish a tolerance before we apply the stronger ones to the intra-uterine surface. I see no reason for this. The endometrium is susceptible of radical treatment, and when you have settled the diagnosis on this organ it is better to resort to the most positive remedies. The reason for this is, it is inconvenient to get the remedial agent on the diseased location, and disagreeable to the patient. I am in the habit of applying a small amount of 4-per-cent. solution of cocaine to the cervix when the curette or caustics are to be used. This measure is especially useful when it is necessary to dilate the cervix before you can enter the uterine cavity with the applicator.

Dilatation may be effected by incision, by tents, by graduated sound, and by the dilator with diverging blades constructed on the order of a glove-stretcher. This is a very important step in the operation. When neglected, you are liable to be deceived in your treatment, and frequently form erroneous conclusions. Before making the caustic application it is necessary to clear the membrane of all the mucus, otherwise it will be very uncertain as to the effect of the remedy. With patient on the left side, and an assistant to manage a Sims speculum, I steady the uterus with a tenaculum, and by means of a small applicator—the most convenient as well as the most inexpensive material for this is the stylet from a rubber catheter, wrapped with a piece of cotton, and the end dipped into the fluid—it is carried to any spot on the interior of the organ that it is desirable to reach. It is very essential to see that the medicine is not pressed from the applicator on its passage through the cervix. To avoid this, I use an iron tube devised by Dr. Palmer, of Cincinnati, which resembles somewhat an ear speculum with a handle attached. It has a slight curve which enables you to pass it into the cervix to any extent without much trouble. The applicator is made to pass through this tube. Another mode of application recommended is to take a sharp-pointed glass tube bent in the shape of a sound, with a rubber bulb on the end, on the order of a medicine-dropper. A few drops of the fluid are drawn up into the tube, which is introduced into the uterus, and by pressing on the same bulb the fluid may be deposited at any point on the endometrium. This should only be done when there is sufficient dilatation to allow the fluid to escape from the cavity.

The zinc preparations, except as caustics,

are very rarely used in the uterus. Iodine in the form of Churchill's tincture, or in combination with carbolic acid, known as Battey's formula, is more generally used now than any other remedy. It is a valuable remedy in endometritis. Two applications a month, and in many cases only one, should be the limit. For the treatment of obstinate uterine catarrh, Dr. Jacobi makes one application a month, either of iodized phenol, equal parts of carbolic acid and glycerin, or the pure carbolic acid. Mundé is a strong advocate for nitric acid. He says: "The milder applications, such as iodine sol. silver, or even the pure carbolic acid, are useless." It is very essential that the cervix be sufficiently patulous to allow free exit to all mucus.

The frequency of application of these escharotics will depend on the duration of the eschar—the stronger ones requiring a longer time before the membrane sloughs. With nitric acid five to seven days, iodized phenol three or four days, tincture of iodine two days, is about the time required for this. It is necessary for the sloughs to be removed even before the milder applications can be made. These may be kept up for two weeks, when the patient should be allowed to rest from treatment altogether, and allow the raw surfaces to get well, before time to make another application of the caustics. A very frequent condition met with, and one that is as often the cause of sterility as any other, is dilatation of the cervix with stenosis of the internal and external os. To relieve this, make two lateral incisions, about half an inch deep, in the cervix, curette the cavity thoroughly, and apply pure nitric acid. This should be done at home, and the patient kept in bed for four or five days to lessen the danger of inflammation.

About three years ago George J. Englemann, of St. Louis, published a series of articles in which he advocated what he called "The Dry Treatment in Gynecology." I have had no experience with this special line of remedies. It consists in the application of an impalpable powder to the vagina or endometrium, by means of absorbent cotton or a powder-blower, such as is used in the larynx. In the American Journal of Obstetrics, page 565, of 1887, will be found a full account of this treatment, with the mode of application.

Drs. Frisch and Polk, of New York, are advocates of what they call treatment by drainage. It consists in dilating the cervix, irrigating the uterus with warm carbolized water, packing the cavity loosely with iodoform gauze, and leaving it for twenty-four hours; then remove the dressing, irrigate the uterus, and introduce fresh gauze. This, doubtless, is a good remedy when the curette has been used for fungosities. It will secure drainage and prevent the absorption of septic materials. Dr. Frisch recommends that the tampon be used after removing remnants of secundines; and says that, during the puerperium complicated by septic endometritis, it is better to pack the uterus with iodoform gauze than to resort to injections. After any surgical procedure involving to a great extent the tissues of the endometrium, it is well to secure drainage through this medium.

The curette has been since its invention the subject of many eulogies, and on the other hand the victim of many adverse criticisms. Recamier, who first invented the curette with sharp edges, did much towards establishing an unsavory reputation for the instrument. It remained for the inimitable Sims, with his wire curette, to arrest in a very large measure all unfavorable criticisms of the instrument and establish one of the most useful therapeutic agents in the hands of the gynæcologist, as a means both of diagnosis and of remedy. It is frequently necessary, before a diagnosis can be made, to have a microscopic view of a portion of the interior of the organ. To accomplish this, a curette is required. When it is only desirable to make a partial application of the instrument, it may be done in the office; but when it is desirable to curette thoroughly the interior of the uterus, it should be done at the patient's home. The indications for its use are where we have a menorrhagia or leucorrhœa that will not yield to milder agents. The manner of its use is: The patient lying on the left side, with a Sims speculum the cervix is exposed, the anterior lip seized from the inside with a tenaculum and drawn gently downward sufficiently to straighten the canal. The instrument, with the proper curve, may, with very

little force, be passed through the cervix. As it passes over the mucosa the peculiar sensation of rough or smooth surface imparted to the finger is quite distinct, and many times the diagnosis is made even before the débris begins to escape. When abortion is suspected, the sharp curette should be used, as it is more difficult to remove the membrane or retained placenta than the ordinary vegetations of the endometrium. After the use of the instrument, it is a good plan to use some one of the antiseptics mentioned above. In cancerous degeneration of the endometrium, when there is much hæmorrhage or pain, the curette will frequently benefit both symptoms. Stubborn cases of catarrh are frequently treated with the curette, followed by nitric acid. This instrument should be used but once a month. At each sitting the entire interior of the organ should be scraped, as it is desirable to make the fewest number of applications.

Montgomery, Ala.

CLINICAL REPORT ON FLUID EXTRACT SPANISH NEEDLES.

BY P. W. PEARSALL, M.D.

J. H——, æt. 34, has for several years been troubled with a bad cough upon the approach of cold winter weather. The cough was dry and somewhat spasmodic in character, patient being unable to raise anything (it seemed, he said, that "if he could only cough up something, the cough would then cease"). The usual measures were adopted, but with only ameliorating effects for the time being. The cough was similar to pertussis, without the characteristic whoop, with attacks occurring from five to twelve times per diem. I prescribed:

(1) ℞ Fl. ext. Spanish needles, Syrup simplex, } ää ℥ j.

M. Sig.: ʒ j after each attack.

Patient reported in two days that the medicine seemed to increase the attacks, but they were not so severe, and there was slight rattling in the bronchial tubes. I then modified the prescription, as follows:

(2) ℞ Fl. ext. Spanish needles. ℥ ij.
Syrup simplex, Glycerin, } ää ℥ j.

M. Sig.: ʒ j taken when inclination to cough.

Patient reported in three days that the cough was a great deal better, but that he did not raise "that thing up." The syrup and glycerin were then dropped.

(3) ℞ Fl. ext. Spanish needles, ℥ j.

Sig.: ʒ ss every three or four hours until expectoration begins.

Patient reported next day that I had struck the thing, and he was hawking and spitting up large quantities of mucus without the difficult and oppressive cough. I then reverted to ℞ No. 2 to keep up expectoration. He reported again to-day, saying he has not coughed for two weeks, and does not have any trouble except that he is unusually constipated, which will be relieved by aloin, strych. and bell. pills.

Muskegon, Mich., Jan. 5, 1893.

CHLORIDE OF IRON AND LIQUOR SEDANS.

BY C. M. R. HINSON, M.D.

Case 1.—Senile neurasthenia of twenty-eight years' standing, aggravated by age, fatigue, and exposure. I exhibited all the established remedies—nux vomica, pulsatilla, phosphorus, avena sativa in compatible combinations, and many others—with but slight improvement. Lastly, I tried P., D. & Co.'s syrup of iron chloride; there has been a steady gain since the fourth day—it is now eight days since the remedy was prescribed. This improvement has been accompanied by none of the annoying effects of the U. S. P. tincture or common druggists' manufacture.

Case 2.—Mrs. M——; age, 53; menorrhagia, with irritability, "dragging" sensation in "small" of back, and severe ovarian and uterine pains. After resorting to all the usual remedies at my command, I gave P., D. & Co.'s "liquor sedans;" within two hours composure followed, and all the symptoms were soon relieved. I consider liquor sedans the *ne plus ultra* of remedies for amenorrhœa, dymenorrhœa, ovarian or fallopian difficulties, and even in uterine inflammations.

Cario, Neb., Feb. 4, 1893.

Correspondence.

HONEST EXCERPTS.

The following paragraph appears in a circular on "Papoid and Pepsin," issued by Johnson & Johnson, 92 Williams street, New York:

> The ferment of Carica Papaya (Papoid) has a proteolytic action on proteids in alkaline, acid, and neutral media.—F. A. Thompson (chemist to Parke, Davis & Co.).

The above is taken from the last paragraph of my paper which appeared in the Bulletin of Pharmacy, October, 1892, page 557 [reprinted in this issue of the MEDICAL AGE, page 89], and which reads as follows: "The carefully prepared ferment of the unripe fruit of *Carica Papaya*, or the fresh juice, has a proteolytic action on proteids in alkaline, acid, and neutral media," etc.

Messrs. J. & J. have taken the liberty with the above paragraph of *omitting* and *inserting* such words as would please them, and thus grossly misrepresenting my statement to the physicians. The most important change thus made was to insert the word "Papoid," a copyrighted name, which does not appear in the entire paragraph. The true name for the ferment of *Carica Papaya* is "papain" or "papayotin," and is so recognized by all authorities.

I trust the physicians will carefully consider the above statements, and form their own conclusions as to the worthiness of papoid, and any literature which may appear in its behalf.

F. A. THOMPSON.

Detroit, Feb. 6, 1893.

NEW YORK NEWS.

Erysipelas-Inoculation—A Substitute for Antipyrin, Antifebrin, etc.—High-priced Tuberculous Milk

[Special Correspondence of the Medical Age.]

At a recent meeting of the Academy of Medicine several prominent surgeons of the city discussed the question of the treatment of malignant growths by inoculation of the patient with erysipelas. This question has attracted the attention of the medical men of Gotham for the past two years, and the weight of authority is at present in favor of the extension of this plan of treatment. Dr. W. B. Coley, who read a paper on the subject, reported several cases of patients suffering from either a sarcoma or a carcinoma in whom the treatment produced complete breaking down of the tumors and permanent recovery. Many who were not cured were temporarily benefited. One patient died of erysipelas a couple of days after the inoculation, but, considering the high death-rate of the primary disease, this case is no argument against the inoculation plan of treatment.

Prof. W. T. Bull considered the inoculation plan a valuable adjunct to surgical procedure. While he thought the treatment was in many respects far from perfect, he believed that improvements in it would be made; the cases in which it had been tested were mostly hopeless, and he thought that its judicious use in less advanced cases would yield better results.

Dr. Wyeth thought that other forms of inflammatory action sometimes arrested malignant growths, although he did not doubt that the specific germ of erysipelas had a special action. He once cured a large sarcoma of the abdominal wall by injecting arsenious acid in and around the growing mass.

Dr. Daniel Lewis, who, although a famous surgeon, is a pessimist on things new, thought the good results obtained were simply due to the local inflammatory action, the same as would be caused by any irritant.

Dr. Coley said the benefit derived was from the antagonistic bacterial action, and that erysipelas acted constitutionally to a certain extent; that it cured secondary tumors elsewhere in the body, thus proving that the breaking down of the growth was due to the action of the specific germ of erysipelas. The method has been to inject bouillon cultures of the streptococci of erysipelas directly into the growth.

***

Phenocol-hydrochloride is the latest antipyretic, and among the more modern class of practitioners of this city has displaced antifebrin, antipyrin, and the other coal-tars, over which it has the advantage of having

no undesirable secondary effects, of having a rapid action, being easily soluble, and a pleasant taste. It is an acid radical added to phenacetin and antipyrin. It is employed in 10-grain doses every two or three hours. It has no poisonous properties, as has been proven by experiments upon lower animals, and its use has thus far been attended with no serious results. Considering that seventeen deaths occurred from the use of antipyrin in Vienna during one winter, a harmless substitute for this dangerous drug is highly desirable. It is a rapid and powerful antipyretic and analgesic, and is excreted through the kidneys, having no detrimental effect upon these organs. It is also a valuable antiperiodic, and has often yielded good results where quinine has failed. A 20-grain dose, given a couple of hours before an anticipated malarial attack, is often attended with brilliant results. In a recent epidemic of malaria in Naples the drug was used extensively as a substitute for quinine, and cured 70 per cent. of the cases treated, failing in 15 per cent., its action having been uncertain in the remainder. The common coal-tars, which a short time ago were so extensively used, have lost their popularity. While antipyrin is a powerful and rapid antipyretic, its use is often followed by death; antifebrin is powerful and certain, but is nearly always followed by depression; and although phenacetin efficiently meets its indications as an antipyretic and analgesic, it is very insoluble. Phenocol-hydrochloride has none of these objections, hence is rapidly becoming popular.

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A certain dairy in New Jersey has for some time been suspected of yielding tuberculous milk. The cows were high-graded, and the milk, owing to its richness, was sold to wealthy New York families at a high price. A couple of months ago one of the city health officers obtained samples of milk from twenty-five of the cows, and in twelve of the specimens were found tubercle bacilli. The animals were ordered to be slaughtered, but, owing to the very natural objection of the owner, this order was not executed, and the milk continued to be sold. A month ago several cans of it were seized and specimens sent to the Carnegie Laboratory for examination. Portions of it were injected, under aseptic precautions, into a healthy guinea-pig, whose family history showed no tuberculous taint. The animal gradually became emaciated, and in three weeks died. The autopsy showed that the mesenteric and inguinal glands were enlarged and had cheesy centres, while in the liver and spleen were numerous miliary tubercles, the centres of which had undergone cheesy degeneration. The normal condition of the lungs showed that the animal did not have tuberculosis previous to its inoculation. Sections of the spleen were examined microscopically and a large number of tubercle bacilli found in them. The diagnosis of acute miliary tuberculosis was made, and the dairy condemned.

New York City, Jan. 30, 1893.

SHALL THERE BE AN ANTI-CHOLERA CONFERENCE?

The Secretary of the State Board of Health of Michigan writes THE AGE as follows:

DEAR DOCTOR—I have written to the executive officers of the State Boards of Health of Illinois, Indiana, and Ohio, asking whether they think it desirable that there be a conference of representatives of those Boards and ours, in Chicago, as soon as practicable, with reference to the sources of danger from cholera, and the best measures which each State can adopt and maintain to lessen those dangers. Chicago, having such an immense interest in this subject, should, I think, be represented in such a conference; accordingly I have written to its Health Commissioner.

Bearing upon the thoroughness of the quarantine at New York and other ports on the eastern sea-board, a number of facts may be mentioned:

At Baltimore, the United States Commissioner of Immigration wrote me Jan. 14th: "Disinfection of baggage, etc., has been discontinued at this port since the latter part of November, 1892."

At New York, immigrants from vessels from which dangerous diseases are known to have occurred are not detained nor their baggage disinfected. For instance, immi-

grants landed at New York Jan. 5th, from the steamship *Weimar*, possibly infected with diphtheria, passed Port Huron, Michigan, Jan. 7th. They carried certificates from Dr. Wheeler, Surgeon U. S. M. H. S., that they had passed the quarantine at New York; but the certificate does not state that there had been any disinfection of baggage, and the certificates are too carelessly made to be of any use whatever. Each certifies that the person named in it, in some instances as many as seven persons, is "an immigrant, an American citizen." The certificates are signed by a stamp.

At Halifax, N. S., the Dominion Immigration Officer, writing Dec. 27th, gave me to understand that the baggage of immigrants going to the Western States was not disinfected at Halifax; he said: "I understand that immigrants going into the Western States are disinfected at Sault Ste. Marie and other ports along the border, and that it is not quite necessary for us to do it here."

Whatever baggage has been disinfected at Halifax, has not heretofore been so treated as to inspire confidence in the disinfection. In the Abstract of Sanitary Reports, U. S. Marine Hospital Service, Dec. 23d, reference is made to the fact that disinfection is attempted there by dry heat. Judging from attempts made to do this at other places, it does not seem probable that it would be successful; probably the temperature of the goods would not be raised to a degree higher than 120° F.

Under such conditions as exist at ports on our eastern sea-board we would expect dangerous communicable diseases to enter this country. That they *do* enter, we have positive proof. Smallpox is now present in a number of States; not all of the outbreaks, but at least five or six of them, are plainly traceable to immigrants who came on the steamship *Saale*, which arrived at New York Nov. 23d. We have in Michigan one outbreak from that source, and perhaps two outbreaks. I believe that there are three in Ohio, and one in Iowa. In this latter State a little girl, in the family where an immigrant stopped, unrolled a bundle of his clothing, thus became infected with smallpox, and died, as did her father and two sisters. If that bundle had been disinfected at New York, or on the eastern border of Ohio, Indiana, or Illinois, that outbreak of smallpox would not have occurred.

The evidence which comes under my observation does not warrant anyone in having confidence in the work being done at several of the quarantine stations at ports through which our dangerous immigrants mostly come.

The American Public Health Association has recommended that the United States establish a public-health service worthy of such a great country, including provision for quarantine, and placing the great vital interests of the people in the care of a commission of expert sanitarians. One branch of Congress, however, has passed a bill placing the whole work in the hands of the Marine Hospital Service; the other branch has passed a bill authorizing the Marine Hospital Service to aid States. There does not seem to be any prospect of this Congress taking any action which will rise to the dignity or demands of the occasion. The Northwestern States are more vitally interested than the rest of this country, because most of the immigrants pass through or stop in those States. But the entire country ought to be especially interested at this time of the Columbian Exposition. Michigan is a great highway through which a great proportion of the immigrants pass.

The question for this State is, whether or not it shall maintain a thorough inspection of immigrants and disinfection of immigrants' baggage at our eastern border. It will be impolitic to enforce there the disinfection of baggage which is destined to pass through Michigan into Illinois and other States, unless the same disinfection is enforced on lines of railroad passing westward south of Michigan. I have never learned that such disinfection of all immigrants' baggage is required on all railroads entering Chicago from the East. I do not understand that it is required at the eastern border of Illinois, Indiana, or Ohio. Some months ago I communicated to several of the State Boards of Health, including certainly Indiana, Illinois, and Ohio, a proposition that a line of inspection and disinfection of immigrant baggage be established from Sault Ste. Marie southward as far at

least as the southern boundary of Ohio; but I do not understand that such inspection and disinfection has been kept up except on the eastern border of Michigan.

The United States Marine Hospital Service has just suspended its immigrant inspections at Port Huron and Detroit. The authorized committee of this State Board of Health has ordered the continuance of the inspections and baggage-disinfections, temporarily, until the views of members of this Board can be learned. It seems to me important that the health authorities of the city of Chicago, the States of Illinois, Indiana, Ohio, and Michigan have a conference, as soon as possible, and determine what is necessary to be done in order to make sure that cholera and other dangerous communicable diseases shall be kept out of the Northwest.

HENRY B. BAKER,
Secretary.

Lansing, Mich., Jan. 31, 1893.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

To the Editor of the MEDICAL AGE:

DEAR SIR—At the second annual meeting of the American Electro-Therapeutic Association the following officers were elected for the ensuing year:

President, Dr. Augustin H. Goelet, 531 West Fifty-seventh street, New York; First Vice-President, Dr. Wm. F. Hutchinson, Providence, R.I.; Second Vice-President, Dr. W. J. Herdman, Ann Arbor, Mich.; Secretary, Dr. Margaret A. Cleaves, 68 Madison avenue, New York; Treasurer, R. J. Nunn, 119 York street, Savannah, Ga.

The third annual meeting will be held in Chicago on Sept. 12, 13, and 14, 1893. A cordial invitation is extended to all members of the profession interested in electro-therapeutics. Arrangements for special rates on railways and at hotels are in progress.

The Committee of Arrangements will be obliged if those who intend being present at the meeting will send their names, the class and amount of accommodation required, titles of papers to be presented, applications for membership, etc., at as early a date as possible. Accommodation should be secured early on account of the crowded condition of the hotels, because of the World's Fair. All communications should be addressed to the Secretary.

The committee will be glad to furnish any information in regard to the meeting, upon application.

THE COMMITTEE OF ARRANGEMENTS,
S. C. STANTON, Secretary.
FRANKLIN H. MARTIN, Chairman.

Chicago, Jan. 19, 1893.

ORGANIZATION OF AN ASSOCIATION OF OHIO RAILWAY SURGEONS.

To the Editor of the MEDICAL AGE:

DEAR DOCTOR—Acting upon the suggestions embodied in the editorial in a recent number of The Railway Age, as Secretary *pro tem.* I have corresponded with many of the railway surgeons of Ohio, and it has been fully determined that all the leading progressive railway surgeons are not only in favor of organizing an association, but are anxious to perfect it at the earliest possible date. Valuable assistance has been offered in the way of addresses, etc. The amphitheatre of the Ohio Medical University has been courteously offered free of charge, as well as all necessary committee rooms.

Many prominent railway surgeons from other States have promised to be present and take part.

An excellent programme is now in preparation, and will appear in The Railway Age at an early date.

In view of all these favorable conditions, the committee named in Dr. Reed's article feels justified in calling upon all the railway surgeons of Ohio to meet in the amphitheatre of the Ohio Medical Uuiversity at Columbus, Ohio, on March 17th, at 9 o'clock A.M., standard time, for the purpose of organizing an Ohio State Association of Railway Surgeons. It is hoped that all interested will make an effort to be present and take part.

Those who expect to be present will please drop a line to the Secretary at Sandusky, that an estimate may be made and proper entertainment provided.

CHARLES H. MERZ, Sec.
S. S. THORNE, Pres't.

Sandusky, O., Feb. 2, 1893.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., FEB. 10, 1893.

Editorial.

A COMBINED MEDICAL CLUB BUILDING.

At the recent meeting of the Wayne County Medical Society at Detroit, its President, Dr. O. S. Armstrong, proposed a plan which will interest all clubable physicians of the old school: A medical building.

There are in Detroit five medical societies of this school, with a total membership of nearly four hundred. They are: The Wayne County Medical Society, Detroit Medical and Library Association, Academy of Medicine, Detroit Gynæcological Association, Michigan Surgical and Pathological Society. Dr. Armstrong's idea is to unite these under one constitution, one staff of officers, one roof.

There are 441 physicians in Detroit, and surrounding territory in Michigan might be drawn from for supporting members.

The building proposed would have four stories. The ground floor would be used only for business purposes. The second floor would contain a large assembly-room for lectures, etc. The third floor would contain reception parlors, and the fourth the club rooms, café, card rooms, and like accessories to good living. Prominent practitioners in Detroit and other cities would be secured for addresses on their work. This feature would be the most prominent, and from it only good of the greatest sort would come.

Dr. Armstrong's suggestion was that each society appoint two or more of its members to serve on a general executive committee to carry the scheme through. He would make the amalgamation a stock company, and only medical men would be members. At the next meeting of the Wayne County Society the matter will be brought up for discussion, and, presumably, the other four will do the same. It is safe to say this Society will vote in favor of the scheme, for several members have spoken in favor of it, and not a dissenting voice has been heard.

Baltimore, Philadelphia, New York, and other cities have such associations and such buildings, and why not Detroit?

Such a plan is a consummation devoutly to be wished.

AN APPEAL FOR UNION FOR PREVENTION OF CONTAGIOUS DISEASES.

All the prominent medical journals of this country and abroad have had their say on the quarantine problem and the progress of quarantine legislation.

While there is considerable difference of opinion as to details and as to the preponderance of National or State quarantine, the demand seems to be universal that more efficient and complete equipment of proper sanitary inspection be provided for and enforced by whatever means are decided to be most practicable, possible, and thorough.

It is hoped that the time may soon come when we shall have a National Officer of Health in the President's Cabinet, under whose executive management much more could be done than under existing conditions. The achievement of this may require tedious legislation, but agitation by the medical and lay press will educate public opinion and so aid in the cosummation of this much-desired end—intelligent sanitary protection from and prevention of contagious, devastating diseases.

The State Board of Michigan, through its Secretary, Henry B. Baker, makes a stirring appeal in a letter published in the correspondence columns of this AGE (p. 81), for a conference of representatives of State Boards of Health of Illinois, Indiana, Ohio, and Michigan, in Chicago, with reference to the sources of danger from cholera and the best measures which each State can adopt and maintain to lessen those dangers. He also points out the risk and peril imminent from the inefficient work being done at several of the quarantine stations at ports through which our dangerous immigrants come.

Such a conference is to be commended, and should receive the earnest support of all physicians in the States interested.

Book Notices.

CONTENTS OF SCRIBNER'S MAGAZINE FOR FEBRUARY.

"A Regular Trainer." Frontispiece. Drawn by A. B. Frost.

From Venice to the Gross-Venediger. By Henry van Dyke. Drawings by Harry Fenn, W. L. Metcalf, and V. Pérard; engraving by C. I. Butler and Peckwell.

Personal Recollections of Charles Sumner. By the Marquis de Chambrun.

The Florentine Artist. By E. H. Blashfield and E. W. Blashfield. Drawings by E. H. Blashfield; engraving by C. I. Butler, E. H. and G. Del'Orme.

A Memory: Anne Reeve Aldrich. By Edith M. Thomas.

"To Her." By T. R. Sullivan.

From Spanish Light to Moorish Shadow. By Alfred Jerome Weston. Drawings by J. H. Twachtman, H. Denman, G. Véron, and Ella P. Morrill; engraving by Closson, Witte, and Peckwell.

Stories of a Western Town—VI: Harry Lossing. By Octave Thanet. Illustrated by A. B. Frost.

Impressions of a Decorator in Rome—Second Part (*conclusion*). By Frederic Crowninshield. Drawings by Kenyon Cox, A. Bassi, and Ella P. Morrill; engraving by Putnam, F. Leblanc, and E. Clément.

Shall I Complain? By Louise Chandler Moulton.

The One I Knew the Best of All: A Memory of the Mind of a Child. By Frances Hodgson Burnett. Chapters V–VII. (*To be continued.*)

How the Battle was Lost. By Lloyd Osbourne.

The Point of View. A Poet and Not Ashamed—Obsolete Standards of Gentility—The Rotary System of Fair-going for Families.

THE ATLANTIC MONTHLY.

The February number of this magazine contains:

Old Kaskaskia. By Mary Hartwell Catherwood.

Books and Reading in Iceland. By William Edward Mead.

Penelope's English Experiences. By Kate Douglas Wiggin.

The English Cambridge in Winter. By Albert Gillette Hyde.

Under the Far-West Greenwood Tree. By Louise Herrick Wall.

The Feudal Chiefs of Acadia. By Francis Parkman.

Count Rumford. By George E. Ellis.

The Eavesdropper. By Bliss Carman.

Alex Randall's Conversion. By Margaret Collier Graham.

The Courage of a Soldier. By S. R. Elliott.

White Mountain Forests in Peril. By Julius H. Ward.

Hegesias. By Edith M. Thomas.

Shakespeare and Copyright. By Horace Davis.

Thomas William Parsons. By Richard Hovey.

English Cathedrals.

Comment on New Books.

Contributors' Club: A Winter Friend.—An Appeal for the Clergy.—The American Gentleman.—The *Pot au Feu*.—Disobeying the Letter.—Ecclefechan.

CONTENTS OF NEW ENGLAND MAGAZINE FOR FEBRUARY.

Literary Chicago. By William Morton Payne.

Prophets [To the Memory of John Greenleaf Whittier]. By Nathan Haskell Dole.

Insomnia. By Edward A. Uffington Valentine.

A Biographical By-Path Through Early New England History. By Charles M. Andrews.

The Girls of Dangar. By Louise R. Baker.

The Larger Self. By Alfred J. Hough.

Ye Romance of Casco Bay. By Herbert M. Sylvester.

Nesbitt. By Ada Marie Peck.

"If I Should Meet Thee." By Arthur L. Salmon.

Philip Bourke Marston. By Newton Marshall Hall.

Fayal. By Rose Dabney and Hester Cunningham.

Kentucky's Pioneer Town. By Henry Cleveland Wood.

A Notch in a Principality. By Frank Bailey Miliard.

John Ballantyne, American. By Helen Campbell.

The Soul of the Violin. By Margaret Manton Merrill.

Compensation. By Edith Perry Estes.

The Pilgrims' Church in Plymouth. By Arthur Lord.

The Story of a New England Parish in the Days of the Province.

Tacoma. By Hale M. Howard.

After the Storm, Calm. By William Ordway Partridge.

The Way of Love. By James Buckham.

Whittier's "Countess." By O. M. A. L.

About Critics and Criticism. By Walter Blackburn Harte.

A Manual of Clinical Ophthalmology. By Howard F. Hansell, M.D., and James H. Bell, M.D. With one hundred and twenty illustrations. Pages 231. Published by P. Blakiston, Son & Co., Philadelphia. Price, $1.75.

It is the purpose of this book to place before the undergraduate and general practitioner of medicine a brief review of the anatomy, physiology, refraction, and common diseases of the eye. This purpose it has fully achieved. It has divested the subject considered of excess of literary verbiage and given a clinical picture in its text, well supplemented by its illustrations, of modern ophthalmological practice. No attempt has been made to exhaustively consider the subject treated, but to succinctly convey to those for whom it is intended the methods of recognition and practical treatment of eye diseases.

PAMPHLETS.

The Forthcoming Report of the Bureau of Education on Professional Education in the United States. By Bayard Holmes, B.S., M.D., Secretary of the College of Physicians and Surgeons, Chicago.

Discussion of Dr. Vaughan's Paper. By Bayard Holmes, B.S., M.D., Secretary of the College of Physicians and Surgeons, Chicago, Ill.

Some Physiological Experiments with Magnets at the Edison Laboratory. By Frederick Peterson, M.D., Chief of Clinic, Nervous Department, Vanderbilt Clinic, College of Physicians and Surgeons, New York; and A. E. Kennelly, Chief Electrician, Edison Laboratory, Orange, N. J.

Notes and News.

An Improved Aseptic Amputating Saw.—

The amputating saws in general use in this country have the old-fashioned pistol-handle-shape grip, which is objectionable, especially if the hand is wet or smeared with oil or blood. The grip becomes lessened and the force reduced. The improved saw is in three sections—the blade, back, and handle—which takes but a few seconds to put together or detach for cleaning. A diagonal slot in the blade catches on to a pin in the handle; and a screw passes through the handle, back, and blade, making one solid piece. The screw also acts as a joint to enable you to raise the back at a right-angle to the blade in case you wish to saw down through the spinal column or a femur. The handle is made round, flat, or oval, preferably round, and is on a plane with the blade, connected by a neck. The shape and angle of the handle gives the most secure grip, and it is impossible for it to slip out of the hand. The increased force given by this handle enables the operator to work faster and save several seconds in time in sawing through the femur. I consider it the best and simplest handle in use. It is manufactured by Shepard & Dudley, New York.—William R. Leonard, M.D., New York, in *Medical Record*, Jan. 21, 1893.

Honors to an American Medical Inventor.—

Dr. Fessenden N. Otis, of this city, was in Tokio, Japan, last autumn, and the Japan Mail says that he was shown unusual courtesies at the time of his visit. Entertained at the famous Maple Club, he also lectured by invitation before several most distinguished medical audiences in the capital. At the Red Cross, Charity, and Army Hospitals he received a warm welcome, and gave interesting demonstrations at the two last institutions. Among the large number present at the Maple Club to entertain the visitor, were court physicians, the surgeons-general of the army and navy, medical members of the Diet, the directors of the Sanitary Bureau and the medical department of the University, and many other prominent members of the profession. Out of compliment to Dr. Otis and in appreciation of the value of the special instruments invented by him, the

Surgeon-General of the Army has ordered a Tokio manufacturer to supply the surgeons of the army with these instruments.—*New York Medical Record*, Jan. 21, 1893.

A Unique Promotion.—

Dr. Mary Putnam Jacobi was elected as president of the Neurological Section of the New York Academy of Medicine, at its last meeting, to succeed Dr. Greame M. Hammond.

Mrs. Jacobi is the first female physician ever elected to the distinguished position of the presidency of a section in the New York Academy since its foundation, now more than twenty-six years.

This is an honor deservedly bestowed on one who richly merits this unique and distinguished promotion; for, though Mrs. Dr. Jacobi is no nerve specialist, her knowledge of diseases of the nervous system is deep and thorough.

It may be said of this distinguished medical matron that, while progressive and aggressive as a writer, teacher, and practitioner of the healing art, she yet preserves to a high degree those feminine charms and graces so peculiar to the refined and cultured lady.—*Medical aud Surgical Reporter*, Jan. 21, 1893.

An Improved Form of Diagnostic Electrode.—

This electrode possesses the following advantages over those now in use:

1. All of the connections are completely insulated, thus preventing the accidental closure of the circuit upon the fingers of the examiner.

2. The shape of the interrupting handle adapts itself to the fingers and hand of the operator.

3. The curve in the shaft attached to the "motor point" facilitates its adjustment and manipulation.

There is a thread cut on the end of the handle where the conducting cord is attached. This permits of a hard rubber cup being screwed on, which entirely covers the connection.

The complete electrode is six and a half inches in length, and has been made for me by the Waite & Bartlett Manufacturing Company, New York.—William M. Leszynsky, M.D., in *Medical Record*, Jan. 21, 1893.

The Bacillus of Acute Rheumatism.—

M. Lucatello, of Genoa, claims to have discovered the microbe of articular rheumatism. At the recent Medical Congress in Italy he showed several cultures at different periods of their development, and in various media, of a micro-organism which he had succeeded in isolating in two cases of articular rheumatism. In one case it was found in the blood, the spleen, and in an infiltrated ganglion situated near the affected joint; in the other it was obtained from the effused fluid in the knee-joint. He describes it as small and round, staining indifferently by Löffler's liquid, and not developing either in the air or in blood-plasma. *In vitro* it will only grow under fairly thick layers of some solid substance or oil, in hydrogen or *in vacuo*, at a temperature of 37° C. It has no pyogenic or saprogenic properties.—*Medical Record*, Jan. 28, 1893.

The Bank-note Bacillus.—

This is the name of a new variety of microbe, thriving, according to a British bacteriologist, on notes of the Bank of England. He believes that a deadly and sure medium for the migration of bacteria is the bank-note of small denomination. Some foreign notes were "experimented" on, and in two cases nineteen thousand microbes were discovered vegetating on a single note. Among them were identified microbes of tuberculosis, diphtheria, and scarlatina. The great majority of the microbes belonged to a peculiar type which, it is suggested, should be called the Bank-note Bacillus. If notes of small denomination are particularly dangerous, physicians in future will refuse to handle anything less than a ten-dollar bill.—*Medical Record*, Jan. 21, 1893.

Medical Editors' Association.—

The annual dinner of the Association of Medical Editors will take place in Milwaukee on the evening of Monday, June 5, 1893. The annual meeting of the American Medical Association will be held in the same city on June 6th, 7th, 8th, and 9th.—*Medical Record*, Jan. 28, 1893.

Dr. Roberts Bartholow.—

It is a great pleasure to announce that Dr. Bartholow has been completely restored to health, and has resumed his practice.

Therapeutic Brevities.

Pental as an Anæsthetic.—Holländer (Centralblatt für Chirurgie, No. 47, 1892) gives his results after the long-continued use of pental as a narcotic.

Pental is, in all cases, an active anæsthetic, and differs from bromether from the fact that the latter often remains inactive. The anæsthesia is always slow, but lasts longer than bromether. There is ordinarily but little excitement, and vomiting as yet has not been noticed. The heart-beat and respiration are always increased, and in anæmic persons the pulse often becomes very weak. Two or three cubic centimeters is a sufficient quantity to begin with, and ten generally completes the narcosis. By highly excitable and very anæmic persons with weak hearts, its use is not so good as in healthy persons.

The best method of giving is by Junker's apparatus, because there is no danger of its going into the eyes; only small quantities are required, and the disagreeable odor is but slightly noticed. In from one to three minutes narcosis is generally complete.

The author highly recommends it for all short operations.—*University Medical Magazine*, February, 1893.

Thymol as an Anthelmintic.—Sonsino (Lancet, Nov. 19, 1892) says that thymol was first used in medicine by Bozzolo against the anchylostoma. It was employed frequently for the filaria sanguinis hominis, but Crombie proved that 10 grammes per diem for three successive days was not enough to cause the disappearance of the embryo filaria from the blood. The author insists that its efficacy in anchylostomiasis cannot in any way authorize us to proclaim it a universal anthelmintic. The only worms that have been seen to pass after the administration of the drug were the ascaris lumbricoides, oxyuris vermicularis, and the trichocephalus dispar. In cases of the ascaris it is not so valuable as are other drugs; but for the oxyuris there is no drug that will so completely eradicate them from the system as thymol. Respectiug the trichocephalite, difficulty of procuring their expulsion is well known. Its value in cases of the large tapeworm is very questionable, in the author's case no results being obtained.

The best plan of administering it is either in the form of powders, or in wafers or cachets.—*University Medical Magazine*, February, 1893.

Peru Balsam in Wound Treatment.—Dr. A. Eichler, of San Francisco (Aerzt. Prakt.), recommends Peru balsam as a dressing, for the following reasons: It adheres well and covers the entire surface of the wound. It has a drying effect, but stimulates granulations. After its application a scab is formed, under which healing goes on. Its use is especially indicated in the treatment of wounds having a tendency to marked suppuration or partial gangrene. In injuries of the hands and fingers the results are excellent. After coaptation of the margins of the wound, the Peru balsam is poured over the entire surface, which is then covered with thin layers of gauze moistened with balsam, and an ordinary dressing. The latter may be left in place for several days, although it is advantageous to remove the outer dressing daily, and moisten the gauze with the balsam without removing it from the wound surface. Under this treatment lacerated wounds heal within a short time.—*International Journal of Surgery*, January, 1893.

Alumnol, a New Astringent and Antiseptic.—Drs. Heinz and Liebrecht have experimented with this substance, which occurs as a fine white powder, soluble in cold water, alcohol, and glycerin. The antiseptic powers of alumnol are exhibited in solutions of 0.01 per cent., which will arrest the growth of bacteria, while the action of a 1-per-cent. solution for twenty-four hours is required to destroy the organisms. In surgical practice the drug will prove useful in the treatment of suppurating surfaces and cavities. It may be used in irrigation fluids (½ to 2 per cent.); the caustic action of 10- to 20-per-cent. solutions has a rapid cleansing effect upon ulcers. The remedy also gave excellent results in gonorrhœal endometritis or gonorrhœa in the male (6 cm. of 1- to 2-per-cent. solution being injected three or four times daily.—*Berl. Klin. Wochenschr.*, No. 46, 1892 (*International Journal of Surgery*, January, 1893).

A New Method of Gastrostomy.—Frank (Wien. Klin. Woch., Dec. 15, 1892) showed a man at a Vienna medical society on Dec. 9, 1892, with cancer of the œsophagus three weeks after the operation, which consisted in making an incision parallel to the costal arch, drawing forward a 4-cm. flap of the anterior wall of the stomach, and uniting the base of this to the serous surface. Then a 2-cm. incision was made through the skin at the upper part of the costal arch. Between this and the first incision was a bridge of

skin, under which a suture was passed and the stomach flap drawn under this strip of skin and fixed to the opening at the upper part of the costal arch. The wound at the lower part of the costal arch was closed. More efficient closure of the fistulous opening, is the advantage claimed for the operation.—*British Medical Journal*, Jan. 14, 1893.

Artificial Camphor.—A French chemist—M. de Mare—has devised a method of preparing camphor artificially. Camphene ($C_{10}H_{18}$) is prepared by distilling very dry hydrochlorate of terebinthine; the product is collected in a large globe and heated, ozonized air being then introduced so as to mingle with the vapor formed. This results in a cloud of camphor ($C_{10}H_{18}O$), which becomes deposited on the internal surface of the globe. It is expected that the method will prove a great commercial success.—*Lancet* (London), Jan. 14, 1893.

Dulcine.—Under this name a new substance has been described which, on account of its sweet taste and its complete freedom from toxic properties, appears likely to attract attention. It is obtained by means of paraphenetol carbamide, a compound prepared in 1883 by Berlinerblau, at which time the manufacture was hampered by its great cost. A new process has, however, been discovered which will in all probability reduce the price sufficiently to allow of general use.—*Medical Record*, Jan. 28, 1893.

Cancer Parasites.—P. Foá (Centralb. für Bacterial u. Parasitenk, vol. ii, No. 6) found enclosed in the cells of carcinoma granular bodies, which showed best in sections stained with hæmatoxylin, and were of varied size and configuration. They can easily be mistaken for leucocytes. He is of the opinion that they are not accidental entities, but are of distinct causal relation to carcinoma.—*University Medical Magazine*, February, 1893.

Antipyrin in Lead Colic.—MM. Devic and Chatin have found antipyrin given in quantities of sixty grains daily, in divided doses, very serviceable in lead colic, both in its milder and in its more severe forms. They consider it far superior to other drugs, except belladonna.—*Lancet* (London), January 14, 1893.

Medical Progress.

PAPOID.*—In the New York Medical Journal, July 30, 1892, on page 15, appears an article by Dr. Frank Woodbury, "On the Digestive Ferment of the Carica Papaya in Gastro-Intestinal Disorders." The writer states that he has devoted considerable attention to the clinical application of papoid—or papain, Finckler,—especially in digestive disorders.

What is papoid? The manufacturers of papoid claim it to be the purified digestive ferment of the unripe fruit of *Carica papaya*, obtained after a process devised by Prof. Finckler, of Bonn, and thus called papain, Finckler. It is stated to be a fine cream-white powder, almost devoid of odor and taste, freely soluble in both water and glyerin, and of *uniform digestive activity.*

What is the medicinal value of papoid? Dr. Woodbury claims that it is a specific for the following disorders:† *Indigestion due to deficient secretion of gastric juice* or of hydrochloric acid (achlorhydria), *where there is an excess of hydrochloric acid*, and where the stomach contents poured into the duodenum are so acid that they prevent the action of the trypsin; in gastralgia, *irritable stomach, nausea and vomiting*, seasickness, *gastric catarrh;* in *catarrhal condition of the intestinal tract*, popularly known as *biliousness;* in *constipation*, especially in children; in *colic* in infants, as well as *persistent vomiting;* its antiseptic action makes it useful in *irritative diarrhœa* in young children; in apepsia of young children, or deficiency of gastric juice in adults due to *atrophy* of the gastric follicles.

Regarding its taste and odor, I can only say that the education of my senses of taste and smell will hardly permit of admitting that it is devoid of taste or odor. This is of little importance, however, compared with the question of uniform digestive activity. It is claimed *that it converts starch with great promptness*, the ultimate product being maltose.

The following experiments with starch were conducted with a recent sample of this papoid and one purchased in 1888, both procured in original bottles: Five grammes of corn starch was dissolved in 75 c.c. of boiling water, which made a stiff paste or cooling to 100° F. To this was added 0.5 gramme of papoid dissolved in 5 c.c. of water, and the digestion carried on at 100°

* See communication entitled "Honest Excerpts," page 80.

† Italics are Dr. Woodbury's.

to 110° F. At the end of four hours it was still a thick paste—possibly not quite as thick as at first—and the smallest particle imparted a deep blue color when added to 2 fluidounces of water containing 2 drops of 1-per-cent. iodine solution. The mixture did not reduce Fehling's solution at this point. After four days' digestion at the same temperature, it became somewhat liquefied, but 3 drops gave a deep blue reaction with 2 drops of the 1-per-cent. iodine solution and the 2 fluidounces of water; also gave a slight reduction to Fehling's solution—not like true maltose or glucose, however.

Similar experiments made in 1888 (Druggists' Bulletin, January, 1888, page 31), on the conversion of starch by papoid, agree with the above results.

The second claim is that it acts upon albuminoids, hydrating them and converting them ultimately into peptone. With coagulated egg-albumin divided through a No. 30 sieve the following experiments were conducted: Ten grammes of the coagulated albumin was digested with one gramme of papoid in 10 c.c. of water, 10 c.c. of 0.2-per-cent. hydrochloric acid, and 10 c.c. of 0.2-per-cent. sodium bicarbonate solution. After three hours' digestion of this thick mass at 110° to 115° F., a very slight action was observed in the three tests, to the extent that some of the particles of albumin had lost their original sharp edges. At the end of twenty-four hours there was a slight increase of action, though some of the albumin particles, even after this long digestion, had not lost their original shape. Experiments made in 1888 also agreed with the above results.

It is further claimed that papoid acts best in concentrated solution, pepsin requiring free dilution. It is true that pepsin acts more energetically in dilute solution than when concentrated, but one gramme of a standard scale pepsin tried under the same conditions as in the above experiments showed decidedly more dissolving or proteolytic power, thus proving the fallacy of the statement that papoid is superior

With finely divided moist mutton fibrin, free from fat, blood, and all soluble matter, papoid showed some digestive action. Five grammes of the fibrin was digested with one-half gramme of papoid in 10 c.c. of neutral, alkaline, and acid water, same as in the albumin tests. After three hours the fibrin in the neutral solution showed little if any change, while in the alkaline and acid solutions it became somewhat softened and digested—which action I consider was largely due to the acid and alkali present, parallel experiments without papoid being conducted side by side with these. Pepsin, under the same conditions, in an acid medium showed more activity than any of the above, though it did not dissolve all of the fibrin in this concentrated solution. Pancreatin tried in an alkaline and a neutral solution, under the same conditions, reduced the fibrin to a semi-fluidlike pulp in *thirty minutes*, and at the end of four hours this was practically dissolved. Pancreatin was found to dissolve egg-albumin more actively than fibrin under similar conditions.

With these results it may be of interest to note the results of others experimenting with papain. A. Ball, in The Pharmaceutical Journal and Transactions, Sept. 21, 1889, page 227, contributes a paper on "Papain as a Digestive Agent Compared with Commercial Pepsin." He found that one sample of papain dissolved twelve times its weight of fibrin in three hours; one nine times, and a third about four and one-half times, its weight. Similar experiments with egg-albumin found the samples capable of dissolving ninety-four, eighty, and thirty times their weight, respectively. Mr. Ball also states that the portion of albuminoid made soluble by digestion did not seem to act like that from pepsin digestion, being slowly soluble in water, undialyzable until acid or alkali is added. In the discussion of this paper (Year Book of Pharmacy, 1889, p. 365) Mr. Benger stated that he had tested several samples of papain on egg-albumin, with negative results, though he had tried them in neutral, alkaline, and acid solutions at different temperatures and long periods. Mr. Wrenn added that papain was a "failure, compared with pepsin."

Dr. Woodbury also claims that papoid emulsifies fat. On this point I have never conducted experiments, believing that any substance possessing so little digestive activity on albuminoids would not have any action on fats. To verify my belief, I beg again to refer to Mr. Ball's experiments "On the Action of Papain on Milk," wherein he states that the fat liberated by the digestion of the enveloping casein was not in the least digested, and, further, that the true emulsification of fats by pancreatin, a much more active ferment, is doubted by such authority as Dr. William Roberts ("Digestion and Diet," 1891, page 60).

The paper of Dr. Woodbury is introduced by a highly colored and attractive engraving, uncommon to journals of a high professional standing, representing "before" and "after" taking papoid. It may seem rather strange to a thoughtful physician that this florid ad-

vertisement represents the action of papoid —or papain, Finckler—on the constituents of a hearty dinner of bread, meat, potatoes, peas, mince pie, cheese, etc., *in an alkaline medium*, and not in an acid representing the gastric juice of the stomach. Is this hearty dinner supposed to pass through the stomach intact and be disintegrated into a culpatious mass in the small intestines?

I am not a man of medicine, and therefore will not discuss the medicinal action claimed for papoid, any further than to state that our knowledge of digestive ferments originated and has progressed as the result of experiments made in the test-tube and verified by physiological trial. If we find that papoid has little digestive power in the test-tube, can we expect it to perform any function in the anatomy of man?

In reading this lengthy article of Dr. Woodbury's, one cannot refrain from turning over in their mind the strong similarity it has to the many articles we are constantly confronted with in the daily newspapers on the virtues of some great discovery made in medicine, compounded and prepared only by a certain manufacturer. Papoid—or papain, Finckler—as presented, *is a panacea*, and the medical profession should be very grateful for the valuable information set forth. It would seem that we need suffer no longer with dyspepsia of any kind, gastric catarrh, gastralgia, constipation, diarrhœa, worms, anæmia, cancers; and no doubt, from its strong antiseptic action, it will be a certain preventive of Asiatic cholera.

I wish, in conclusion, to add that the carefully prepared ferment of the unripe fruit of *Carica papaya*, or the fresh juice, has a proteolytic action on proteids in alkaline, acid, and neutral media, but it is very weak, compared with the action of the ferment of the pineapple (*Ananassa sativa*), which acts in the same media and has, I believe, promise of great value in medicine.—F. A. Thompson, Ph.C., in *Bulletin of Pharmacy*, October, 1892.

On Certain Organic Extracts, their Preparation and Physiological and Therapeutical Effects.—Since the experiments of Brown-Séquard, more than three years ago, observers in various parts of the world have been engaged in similar investigations, not only with the juice of the testicles, but with extracts from other glands of the body. So far, however, as I am aware, no systematic researches have been undertaken along the line of those the details of which I am about to give, and with which I have been occupied almost continuously since the summer of 1889.

In the New York Medical Journal for August 31, 1889, I published a report of some of the results obtained by me with the expressed juice of the testicles of the ram. The cases reported were: One of traumatic neuritis, which was entirely cured by one injection, after having lasted longer than a year; two of cardiac weakness, with some of the symptoms of so-called neurasthenia, one of which has remained entirely cured without subsequent treatment, and the other (Case II), after repeated injections at different periods, is now entirely well; one of sexual impotence, in which there has been no relapse; two of muscular rheumatism and lumbago, which have remained cured; one of hemiplegia, the result of cerebral hæmorrhage, in which the patient was improved in walking, as reported, but who subsequently died from a second attack; one of melancholia, with fixed delusions, which underwent no improvement and of which I know nothing subsequently; and one patient suffering from cardiac asthma, the result of excessive mental work, and whose cure has continued to this day.

In regard to these cases I said:

"It is not necessary for me to draw any conclusion from these experiments, as they speak for themselves. It will be seen that there is evidence to show that we have in the testicular juice a valuable addition to our materia medica, the precise worth of which, however, it is not yet in our power to establish."

So far, I have nothing to retract from what was stated in the article in question; but the paragraph before the final one I am obliged, as the result of much more extended observation, to take back, so far, at least, as it expresses a preference for the expressed and fresh juice. It is as follows:

"One point further seems to call for some consideration. I have observed that some of the experimenters sterilize the testicular juice before using it. If there is any virtue whatever in the liquid, it would be entirely destroyed by such a process. It might as well be boiled as sterilized. Experiments with such a substance are absolutely valueless. Sufficient immunity against the propagation of disease can be obtained by examining the fluid microscopically before it is injected into the system. Whatever is capable of killing the germs of disease would be equally capable of killing the vital germs upon which the testicular juice depends for whatever efficacy it may possess."

So far from these statements being correct,

I am satisfied that the method I am about to describe results in the procuring of a far more powerful agent than is the fresh juice, and that the latter cannot always be used with safety, liable as it is to produce local abscesses and serious constitutional disturbance. In more than a third of the cases in which I have used it abscesses were produced, and in several painful swelling of the arm into which the injection was thrown, with fever, and in one case delirium.

Since that time I have not only continued to use the extract of the ram's testicles in those cases in which I conceived it to be indicated, but have extended my observations to a study of the influence exerted on the human body by the extract of other organs, especially that of the brain, the spinal cord, the pancreas, the thyroid gland, and the heart. For the three years past I have pursued these investigations, and if I have not rushed into print as soon as some others it is only for the reasons that time has been required to prepare the extracts according to the processes I have found most advantageous, and that I did not wish to commit myself to opinions that further examination might prove to be erroneous. The time now, however, seems to have arrived at which I can lay the main points of my researches before the medical profession. I do not give them all at this time, for I have not yet reached definite conclusions in regard to all the matters embraced within the line of my investigations. I state, however, sufficient to give a clear idea of the theory upon which they have been conducted, and which, as it will presently be seen, admits of very extended amplification. I am quite sure that the system I am about to bring to the notice of the profession is not only well founded in fact, but is in accordance with physiological law, and that we have in it philosophical means of combating disease, of which I can only lay some part of the foundation, but which, through the accumulation of material by other observers, will eventuate in the erection of a permanent and worthy therapeutical structure.

This system, briefly stated, is as follows:

Organic beings possess the power of assimilating, from the nutritious matters they absorb, the peculiar pabulum which each organ of the body demands for its development and sustenance. The brain, for instance, selects that part which it requires, the heart the material necessary for its growth and preservation, and so on with the liver, the lungs, the muscles, and the various other organs of the body. No mistake is ever committed. The brain never takes liver nutriment, nor the liver brain nutriment; but each selects that which it requires. There are, however, diseased conditions of the various organs in which this power is lost or impaired, and, as a consequence, disturbance of function, or even death itself, is the result.

Now, if we can obtain the peculiar matter that an organ of the body requires, and inject it directly into the blood, we do away with the performance of many vital processes which are accomplished only by the expenditure of a large amount of vital force.

Let us suppose a person suffering from an exhausted brain, the result of excessive brain-work. Three hearty meals are eaten every day, but, no matter how judiciously the food may be arranged, the condition continues. Now, if we inject into that person's blood a concentrated extract of the brain of a healthy animal, we supply at once the pabulum which the organ requires. Then, if under this treatment the morbid symptoms disappear, we are justified in concluding that we have successfully aided Nature in doing that which, unassisted, she could not accomplish.

That is the system. I believe it is applicable not only to the brain, but to all the other organs of the body.

And yet I am not quite sure that it is entirely new. I recollect reading nearly forty years ago an account of some observations made by, I think, a German physician relative to the treatment of diseases of the several organs of the body by a system of diet consisting of the corresponding organs of healthy animals. Thus, liver disease was treated by beef's liver, heart disease by beef's heart, brain disease by beef's brain, and so on. My memory seems to be clear on the main point, but I have searched in vain for the paper to which I refer. The fact, however, that the various foods in question were cooked and were taken into the stomach, constitutes a great difference from the system which I am now discussing, both physiologically and therapeutically, and the results do not admit of comparison. The germ of the idea, however, is the same, and I cheerfully yield to my unknown proto-observer whatever distinction may be claimed on the score of priority.

Besides, there have been isolated observations made within the last two or three years by German and French physicians which are to some extent in accordance with those which I have been conducting, but they do not seem to have led to any definite results or to have been systematically carried out. Generally they have been performed with the fresh juice of the organs; and although at first sight this method would appear to be preferable to any other, experience shows

that it is, as I have said, not unattended with danger. Thus, the organ may not be entirely fresh; morphological matter is almost certain to be injected; it is nearly impossible to filter the juice through a porous stone filter, and when passed through common filtering-paper substances injurious to its action and provocative of local abscesses and constitutional disturbance cannot be excluded. Indeed, these results have frequently followed from the experiments of others, and I have myself, as I have stated, often encountered them, notwithstanding that all possible care was taken in the preparation and administration of the agent. The method, however, which I have finally adopted, never produces either morbid local or general disturbance beyond a slight smarting at the time of injection and occasionally a little subsequent itching and erythema, and it is that also from which I have derived the maxima of beneficial effects. It has been arrived at after many trials and consequent disappointments, and it is one which, with our present knowledge of the subject, I do not think can be advantageously departed from.

Taking the brain as a type of the process employed—and it is not materially varied with the other organs of the body—it is as follows:

The whole brain of the ox, after being thoroughly washed in water acidulated with boric acid, is cut into small pieces in a mincing machine. To one thousand grammes of this substance placed in a wide-mouthed, glass-stoppered bottle, I add three thousand cubic centimeters of a mixture consisting of one thousand cubic centimeters each of a saturated solution of boric acid in distilled water, pure glycerin, and absolute alcohol. This is allowed to stand in a cool place for at least six months, being well shaken or stirred two or three times a day. At the end of this time it is thrown upon a porous stone filter, through which it percolates very slowly, requiring about two weeks for entirely passing through. The residue remaining upon the filter is then inclosed in several layers of aseptic gauze and subjected to very strong pressure, the exudate being allowed to fall upon the filter and mixed with a sufficient quantity of the filtrate to cover it. When it has entirely filtered it is thoroughly mixed with the first filtrate, and the process is complete.

During the whole of this manipulation the most rigid antiseptic precautions are taken. The vessels and instruments required are kept in boiling water for several minutes, and are then washed with a saturated solution of boric acid. Bacteria do not form in this mixture under any circumstances, but it is necessary to examine it from time to time microscopically in order to see that no foreign bodies have accidentally entered. Occasionally, from causes which I have not determined, the liquid becomes slightly opalescent from the formation of a flocculent precipitate. This is albuminous in its character. It sometimes takes place in a portion of the extract kept under apparently identical conditions with other portions that remain perfectly clear. It is certainly not an essential constituent. It can be entirely removed by filtration through Swedish filtering paper previously rendered antiseptic, without the filtrate losing any of its physiological or therapeutical power.

Five minims of this extract, diluted at the time with a similar quantity of distilled water, constitute a hypodermatic dose.

The most notable effects on the human system of a single dose are as follows, though in very strong, robust, and large persons a somewhat larger dose is required, never, however, exceeding ten minims:

1. The pulse is increased in the course of from five to ten minutes, or even less in some cases, by about twenty beats in a minute, and is rendered stronger and fuller. At the same time there is a feeling of distension in the head, the face is slightly flushed, and occasionally there is a mild frontal, vertical, or occipital headache, or all combined, lasting, however, only a few minutes.

2. A feeling of exhilaration is experienced which endures for several hours. During this period the mind is more than usually active and more capable of effort. This condition is so well marked that if the dose be taken at about bedtime, wakefulness is the result.

3. The quantity of urine excreted is increased, when other things are equal, by from eight to twelve ounces in the twenty-four hours.

4. The expulsive force of the bladder and the peristaltic action of the intestines are notably augmented — so much so that in elderly persons in whom the bladder does not readily empty itself without considerable abdominal effort, this action is no longer required, the bladder discharging itself fully and strongly, and any existing tendency to constipation disappears, and this to such an extent that fluid operations are often produced from the rapid emptying of the small intestine.

5. A decided increase in the muscular strength and endurance is noticed at once. Thus I found in my own case that I could "put up" a dumb-bell weighing forty-five

pounds fifteen times with the right arm and thirteen times with the left arm, while after a single dose of the extract I could lift the weight forty-five times with the right arm and thirty-seven times with the left arm.

6. In some cases in elderly persons an increase in the power of vision is produced and the presbyopic condition disappears for a time.

7. An increase in the appetite and digestive power. Thus a person suffering from anorexia and nervous dyspepsia is relieved of these symptoms, temporarily at least, after a single dose hypodermatically administered.

These effects are generally observed after one hypodermatic injection, and they continue for varying periods, some of them lasting for several days. In order that they may be lasting, two doses a day should be given every day or every alternate day as may seem necessary, one in the morning and one in the afternoon, and kept up as long as the case under treatment seems to require. The most notable effects are seen in the general lessening of the phenomena accompanying advancing years. When some special disease is under treatment, the indications for a cessation of the injections will be sufficiently evident either by an amelioration or cure or by failure to produce these results.

To the substance obtained in the manner mentioned and held in solution I have given the name of cerebrine as the one, in view of its origin, most appropriate.

I have employed the solution of "cerebrine" with decided advantage in cases of nervous prostration—the so-called neurasthenia,—in insomnia due to cerebral hyperæmia, in migraine, hysteria, general paresis, hebephrenia, and epilepsy. In these latter —two cases of the *petit mal* variety—the effect has been so marked that I am not without the hope that cures will result, although I am not able as yet to speak positively on this point, the patients having been less than a month under treatment. In two cases of the *grand mal* the number of paroxysms has been reduced more than one-half and greatly mitigated in severity. In six other cases which were of long duration I could perceive no curative effect.

In the case of general paresis no permanent therapeutical influence was apparent, though for several days the *délire de grandeur* was absent. In the case of hebephrenia, however, occurring in the person of a young lady 18 years of age, the effect has been most happy, the symptoms entirely disappearing in a little more than a month's treatment.

In two cases of nervous prostration, the result of long-continued emotional disturbance, and in which there were great mental irritability, dyspepsia, physical weakness, loss of appetite, and constipation, relief was rapidly afforded. In three other cases, in which the most notable symptom was functional cardiac weakness, the effect has been all that could have been desired. In these cases it was employed in conjunction with "cardine," the extract of the heart of the ox made in the manner already described.

It is not my intention at the present time to enter into a full discussion of this interesting subject or to allude further to experiments in the treatment of other diseases which are not yet concluded. In the near future I shall enter more largely into the consideration of the subject in all its details. I may add, however, that I have used with excellent results, in cases in which it seemed to be indicated, the extract of the testicles of the bull, and also that of the pancreas of the ox, and these investigations also will be given to the profession at an early day.

It is alleged by some medical writers that there is no difference in the therapeutical effects of medicines whether they be taken directly into the blood by hypodermatic injection or ingested into the stomach; but it is scarcely worth while to seriously combat this assertion. For, while it may be true that some substances are not altered by the gastric juice before they are absorbed into the system, it certainly is not true of many others, and it surely is erroneous as regards those of animal origin. Indeed it is, I think, doubtful if anything capable of being acted upon by the gastric juice and of being absorbed into the blood gets into the system in exactly the same form in which it got into the stomach.

Thus the vaccine virus may be swallowed with impunity, as may also the poison of the rattlesnake and of other animals secreting toxic agents. Opon one occasion I gave a young dog, by the mouth, twenty minims of fresh rattlesnake-poison without its having the slightest perceptible effect upon him. I need not say that this quantity would have been sufficient to kill at least fifty men. Woorara, which is, as is well known, fatal to animal life when injected into the blood, is innocuous when taken into the stomach; and even those that do possess some action when swallowed, exert this power in much less degree and require larger doses for it to be produced.

Relative to the animal extracts to which this communication refers, I have ascertained beyond question that if they are enclosed in capsules so as to reach the stomach without

coming in contact with the mucous membrane of the mouth, they are absolutely without physiological or therapeutical effect so far as can be perceived, even when given in quantities of a teaspoonful or more. But if dropped upon the tongue in double the quantity used for hypodermatic injections, and allowed to remain in the mouth without being swallowed—thus avoiding the action of the gastric juice—they are absorbed, and exert a slower but still decided effect. If employed in this manner, three or four doses should be taken daily. Ten minims of the solution of cerebrine placed upon the tongue of a healthy person will cause acceleration of the pulse, flushing of the face, and slight headache in ten or fifteen minutes, together with the other phenomena I have mentioned.

I have expressed the opinion that the substance extracted from the brain and other organs is the material required for the nutrition of the corresponding organs of the body; but this is only a theory, to which I am not in the slightest degree attached, though I think it physiological and plausible. It may be that the mixture of boric acid, alcohol, and glycerin exerts a metamorphic influence and causes the formation of a ferment having the power of restoring to the weakened brain or other viscus the lost or impaired power of assimilation. However this may be, the facts remain unaltered. — William A. Hammond, M.D., in *New York Medical Journal*, Jan. 28, 1893.

Analytic Notes on Liquid Malt-Extracts.—From brief notices in recently-issued text-books as to the employment of malt extracts, it appears that the leading therapeutists are not favorably impressed with their usefulness. Nevertheless, if one may judge by the variety of brands now in the market, and by the extensive displays occasionally seen in the show windows of drug stores, it must be inferred that either physicians are very liberal in prescribing these preparations or the public has acquired a strong tendency to their use.

It seems advisable, therefore, to make some comparative analytic determinations and some inquiry as to how far any useful physiologic effect may be obtained from them. The primary motive leading to their employment is doubtless to secure the starch-digesting power which is active in malt, due, as is well known, to the enzyme diastase. This body is, however, somewhat sensitive to chemical influences. Its activity is quickly destroyed at certain temperatures, and suspended, if not destroyed, by many substances of the antiseptic class.

It has not been deemed necessary to include in the examination the solid or semi-fluid extracts. These possess diastatic power, are free from objectionable ingredients, such as alcohol or salicylic acid, and by their very nature are not likely to be used except under medical advice. The extracts prepared by the Maltine Co., Parke, Davis & Co., and the Trommer Malt Co. possess decided starch-converting power, and evidently contain notable amounts of diastase. The liquid extracts are mostly alcoholic, so that there is a factor in their use that has sanitary as well as medical importance.

The following samples represent, I believe, the principal brands of liquid malt-extracts sold in Philadelphia. They were obtained for me by a retail drug house of excellent standing, and were all in unbroken packages, in good condition. I learn that at least one of the larger breweries makes a malt extract which is furnished to retail druggists in quantity, with a label bearing the druggist's name. I have designated this as "Trade" extract (No. 13). It apparently finds considerable sale.

No.	Brand.	Claims.	Alcohol.	Solid ext. grms. to 100 c. c.	Salicylic acid.	Diastatic effect
1	Blair's	No alcohol	None	16.06	None	None.
2	Evans's	Less than 4 per cent. alcohol.	3 per ct.	5.35	"	"
3	Dukehart's	No alcohol	Present	25.22	Present	"
4	Genois's	Less than 4 per cent. alcohol	6 per ct.	15.4	None	"
5	Wyeth's	Less than 3 per cent. alcohol	2.98 p. ct.	14.1	"	"
6	Malt-Hopine	... .	Present	8.97	Present	"
7	Hercules	.....	"	10.23	None	"
8	English	Rich in extractive	"	5.24	"	"
9	Wampole's	A trifle over 4 per cent of alcohol	7.7 per ct.	12.89	"	"
10	Standard	Absolutely free from alcohol	3 per ct	9.58	"	"
11	Tarrant's	.....	Present	10.24	Present	"
12	Johann Hoff's	... . . .	"	8.44	None	"
13	"Trade"	Highest per per cent. of extract and lowest of alcohol of any malt extract in use.	3 per ct.	5.1	"	"

The foregoing table does not require much comment. It shows that in three of the brands—Dukehart's, Malt-Hopine, and Tarrant's—a most objectionable ingredient, sali-

cylic acid, is present. This substance, apart from the fact that the commercial article is decidedly poisonous by reason of impurities, is especially objectionable in a malt extract, for it interferes with several of the digestive ferments. Three of the brands—Blair's, Dukehart's, and Standard—make a special claim for freedom from alcohol, but only the first-named justifies this claim. The claim for richness in extract is seen also to be not substantiated in the two cases, English and "Trade," in which it is made.

As might be expected, no diastatic power was observed in any of the samples. For an exact determination of relative diastatic power it is necessary to make conversions under strictly analogous conditions, in the presence of excess of starch, and measure the sugar formed; but for the determination merely of the presence or absence of active diastase a qualitative test suffices. It was found that with each of the liquid extracts several hours' action at a moderate temperature was insufficient to convert even very small amounts of starch. In some instances measurements were made of the sugar, and it was found that none was formed by the action on starch, the Fehling figure for the liquid after treatment with starch being the same as that before treatment. As in the case of one of the samples, "Standard," such positive claim is made—the advertisement stating that it is "absolutely free from alcohol"—two samples were tested, and alcohol was found in both.

It is apparent from the foregoing assays that the liquid malt-extracts are mostly beers, that they have but little if any value as either food or digestives, and that several of them are positively injurious. It is a fitting commentary on the situation to note that of two most distinguished American authorities on therapeutics, one recommends that malt extracts should be given before meals and the other that they should be used after meals. It is worth while noting that as substitutes for beer these extracts are not economical.—Henry Leffmann, M.D., of Philadelphia, in *Medical News*, Jan. 28, 1893.

A Case of Epithelioma.—A. H. Ohmann-Dumesnil, M.D., reports the following case in a recent number of the St. Louis Clinique: May 6, 1892.—Mrs. M. W——, aged 65; ulcer about the size of a silver quarter on the left side of nose, which she thought had existed for about six years, and had been growing for last few months. It presented an extremely unhealthy appearance, being undermined at the edges, and constantly secreting pus. It bled very readily, and caused great pain at times, the pain being of a burning variety, shooting from the lesion outward. The only previous treatment had been with calomel. Pure carbolic acid was now applied, and an ointment consisting of aristol ʒ j and ung. aq. ros. ʒ ss ordered. Under this treatment she steadily improved until June 20th, when she complained of continuous pain around the upper edge, and shooting pains to left eye. This disappeared after a few days of vigorous treatment with carbolic acid, but there was some hæmorrhage from upper border continuing in spite of treatment. In all respects the appearance was much better. Caustic pyrozone was now applied to upper border, with result of effectually checking the hæmorrhage. August 12th, an ointment composed of carbolic acid ʒ ss and ung. aq. ros. ʒ j was ordered, to stimulate it to healthy action, as the granulations showed a tendency to become sluggish. August 15th, slight ulceration of lower border was noticed, and caustic pyrozone applied with perfect results. From this time on, improvement was uninterrupted, and patient was discharged, cured, Sept. 7th, at which time the entire site of the previous lesion was covered by perfectly normal, healthy epithelium.

Tasi as a Galactagogue.—According to Drs. E. del Arca and J. Sicardi, of Buenos Ayres, tasi (*Morrenia brachystephana*)—an Asclepiadea indigenous to the Argentine Republic, where it grows in abundance—is an excellent remedy in cases of diminished or suppressed lacteal secretion. The leaves or the root (fresh or dry) of this plant are employed in infusion, and the fruit in decoction: 30 grammes (1 oz.) of tasi root are infused in 200 grammes ($6\frac{3}{4}$ fl. oz.) of water, and administered in tablespoonful doses in the course of twenty-four hours; or a decoction of 40 grammes (10 drs.) of the fruit in 200 grammes of water may be given in the same way. These preparations are flat in taste, and have a bitter and rather disagreeable after-taste.

Of fifteen women—three primiparæ and the others multiparæ—affected with agalactia and treated with tasi, Dr. del Arca claims (Sem. Méd.) to have obtained a favorable result in eleven, a doubtful result in two, and a negative result in two. The more or less remoteness of the period of treatment from the confinement did not appear to exert any influence on the more or less rapid return of the lacteal secretion.—*Merck's Bulletin*, Nov 15, 1892.

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Original Articles.

THE SYRUP OF HYDRIODIC ACID AND ITS USES.*

BY REYNOLD W. WILCOX, M.D., LL.D.†

The days of unpalatable remedies are past. Elegant pharmaceutical preparations will be adopted just so soon as it is shown that they are efficient and stable. To-day it is necessary that we should cure not only surely and quickly, but, as well, pleasantly. Were I to speak of the syrup of hydriodic acid merely as a palatable remedy, I would not occupy the time of this Society to-night; but when, in addition to its freedom from disagreeable qualities, I can speak of it as a remedy that has a wider field of usefulness, presenting none of the disadvantages of the alkaline iodides, I am sure that this evening will be well spent. The syrup of hydriodic acid is presented as a sure and safe relief from what has been termed by Field as the iodide-of-potash punishment. Hydriodic acid is no new remedy. It was in 1855 that Murdock devised a thick syrup, because he found that all other solutions were unstable. Not until 1878 was an unalterable syrup placed in the market. Last year for the first time was there presented to the profession a permanent syrup of hydriodic acid which was of suitable strength, containing 11.84 grains of hydrogen iodide to the ounce of syrup. Hydriodic acid, or hydrogen iodide, is prepared by passing sulphuretted hydrogen (hydrogen sulphide) into an aqueous solution of iodine. The reaction is $4I + 2H_2S = 4HI + 2S$; the sulphur falls to the bottom as a powder. In the decomposition a small quantity of the iodine is changed into hydrogen iodide, which in turn dissolves more iodine, and also prevents the sulphur from interfering with the process. As a matter of fact, the process is somewhat more complicated as given in the United States Pharmacopœia. The iodine is dissolved in alcohol with a very feeble heat, in a loosely stoppered flask, and to this solution is added the syrup, previously mixed with distilled water. Through this mixture hydrosulphuric acid gas is passed until it acquires a pure yellowish color and ceases to turn brown on shaking. It is then filtered, to separate the sulphur, through white filtering paper, and the first portions returned until it passes clear. The filter is washed with distilled water, and both the filtrate and the washings evaporated on a water bath at a temperature not exceeding 131° F., being constantly stirred until all odor of hydrosulphuric acid has disappeared. When cool, the spirit of orange and sugar is added, and when the solution is complete it is strained and placed in bottles.*

The syrup, as at present prepared from hydrogen iodide, contains no free iodine, nor is it unsightly like the tincture. At the same time, however, its proportion of iodine is very great. Iodide of hydrogen contains 99.22 per cent. of iodine and 0.78 per cent. of hydrogen. The syrup prepared by Parke, Davis & Co., which has the advantages over the officinal syrup that it can be used in

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* Since this paper was prepared, my attention has been called to a brief but valuable paper by Dr. W. Gill Wylie, published in the New York Medical Record in 1879, in which he states that he has used, since 1872, hydriodic acid made from the following formula: Iodide of potash, 1 drachm; tartaric acid, 1½ drachms; water, 4 ounces; one drachm of this mixture equaling in effect on bronchial mucous surfaces twenty grains of iodide of potash. This preparation, if mixed with syrup, remains without decomposition for several days. The syrup of hydriodic acid was made for him by Mr. R. W. Gardner.—R. W. W.

smaller dose and is of more agreeable taste, and which has been used by me during the past year in my studies, contains 2 per cent. of absolute hydriodic acid. Hydrogen iodide itself is a colorless, irrespirable, non-inflammable gas. It has a slightly acid reaction in aqueous solution and a sour, styptic taste, but this peculiarity disappears in the syrup. The syrup is a straw-colored liquid of pleasant acidulous taste. If it is dark brown or reddish or turbid—a condition which I have never found in the preparations which I have made use of—it should be rejected, for this departure from the normal indicates the setting free of iodine. In point of permanency this preparation is far superior to those commonly met with in the market. It is so stable that starch does not bring out any blue color. However, it should be kept cold and tightly corked. Field has found that if the ordinary commercial syrup is exposed to a temperature of 32°, or 100° Fahrenheit, it changes its chemical constitution and possesses no deleterious properties.

Many years ago Duroy pointed out that iodine was an effectual antiseptic, having a direct action on pus and organized ferments; that aqueous solutions would keep indefinitely; that its syrups do not ferment, and that in combination with syrup, while these syrups remain clear, it is no longer irritant or caustic.

The system can be saturated with it up to the point of iodism; it is readily absorbed and acts promptly, and from an empty stomach, without change, it passes immediately into the circulation. In ten minutes even, iodine can be detected in the urine when this syrup has been administered upon an empty stomach, which is proof conclusive of its efficiency. It is even more active than the alkaline iodides, because it contains iodine in the best form for assimilation. It is non-irritant, because hydrogen in small quantities neutralizes the irritant effect of the iodine.

We have in the past so frequently made use of the iodide of potash that we all know from unfortunate experience its unpleasant effects—that it produces loss of appetite; that it produces marked mental depression; that it irritates the fauces and the stomach; that it neutralizes the gastric fluids, and that it has a nauseating taste. We know that in the stomach it is changed into a carbonate of potash, which is hurtful to the organism and especially irritant to the kidneys. We know, further, that in the use of the alkaline iodides, frequently, when we least expect it, we get the symptoms of iodism; although many of these cases can be laid to idiosyncrasy, yet we never can be sure that even a small dose may not give rise to these symptoms. Ehrlich has reported a case in which about three grains of iodide of potash gave marked symptoms of iodism. The swelling of the eyelids, the flow of tears, the flow of watery fluid from the cells of the frontal sinuses, the pain in the forehead, the increased secretion from the Schneiderian membrane, the sleeplessness, the slight angina, the slight trismus, the neuralgias, particularly inframaxillary or infra-orbital, are familiar to all of us. The irritation of the stomach, a much more constant symptom, may often be so great that we are obliged to omit the remedy. The œdema of the glottis, at times slight, at other times has been severe enough to terminate the life of the patient. Hallopeau has described the acneform eruptions, bullous eruptions, painful nodes in subcutaneous tissues, and his observations have been frequently confirmed. Severe, and even fatal, cases of iodism are frequently met with in the literature. I believe that it is possible to so saturate a patient with iodine by the administration of hydriodic acid that we can produce iodism, but I feel certain that this syrup is much more manageable; that, by careful administration, iodism need not occur; and, further, that a part of the symptoms of iodism are due to the influence of the alkaline bases with which iodine is combined.

The syrup of hydriodic acid is absolutely incompatible with all alkalies, all metallic salts, all oxidizing agents, as permanganate and chlorate of potash, the latter converting the hydriodic into iodic acid, which is poisonous. Upon investigation I have found that mixtures of many remedies with this syrup, which are suggested in the literature, are by no means compatible.

As the first important point in the mode of administration, I would emphasize the fact that it should not be given in combina-

tion. Secondly, the time of administration is important. The stomach must be empty, so that it can be absorbed without the change produced by food-stuffs, for the iodates produced are toxic. One-half hour before eating, the stomach is of neutral reaction. As a third point, I would insist that it should be well diluted with water; that the dose should be dissolved in one-half wineglass, or preferably a full wineglass, of water. The dosage varies according to the purpose for which we employ the syrup. Two to three drachms every two hours in acute rheumatism is an amount that should not be lessened until improvement takes place; and this dose should be continued for seven to ten days after the symptoms have disappeared, to insure recovery and prevent relapses. On the other hand, in acute bronchitis I am of the opinion that one-fourth to half a drachm, and this dose gradually increased and frequently repeated, will yield more brilliant results. But in syphilis I would begin with half an ounce, and push it rapidly until the patient responds to the remedy.

The cases in which I have used this remedy have been numerous and of considerable variety. In cases of pulmonary disease where the symptom asthma is prominent, with Knight I have had surprisingly satisfactory results, especially when these cases were complicated with chronic bronchitis. There always followed relief of the asthmatic conditions, rapid amelioration of cough, decreased expectoration when it had been profuse, the sputum has become less viscid and thinner, and the general health is likely to improve. As Wile has pointed out, in long-standing bronchitis, when the lung seems to take on a deeper-seated and less tractable form of the disease, I have found some brilliant results. Here small doses, frequently repeated, are to be advised. I have found, in cases that I have had, of fibrous hardening about tubercular deposits, that the deposit was favorably influenced. I have noticed in the bronchorrhœa of old people that the quantity of expectoration was markedly improved. Aulde has used this remedy with success in those forms of bronchitis which predispose to phthisis. I can confirm his observations, and believe these cases to be those in which the previous endobronchial affection has now become peribronchial, so that the nutrition of the lung is interfered with. Partly due to its antiseptic properties, and probably also to the fact that it liquefies viscid bronchial secretion, is the somewhat limited use of the syrup in the treatment of whooping-cough.

Bentley, some years ago, apparently cognizant of the observations of Duroy, treated thirty-one cases of smallpox in the suppurative and subsequent stages up to complete desquamation, with the happiest results, all recovering speedily.

Syphilis in the later stages has been treated, by a large number of physicians, with this remedy. Here we note, as an exception to the statement made above, that we can combine it with the biniodide of mercury without fear of decomposition. The protoiodide of mercury should not, however, be used with the syrup, as it is converted into the biniodide, and we are not certain of the amount of the dose that we administer. Aulde points out that the syrup of hydriodic acid renders yeoman service in removing waste products from the system, but unfortunately lacks the peculiar property of arsenic which causes fatty degeneration of morbid tissue, yet has a field of usefulness which the latter cannot occupy.

Wile, with exceptional opportunities, has found always satisfactory and frequently surprising results in the use of this remedy in chronic lead-poisoning; the additional therapeutics being, insisting that the bowels be kept free, and using electricity, the faradic current; he has also treated arsenical poisoning with success.

Burrall suggested the use of this syrup in obesity, it presenting none of the disadvantages of the alkaline iodides. It steadily diminishes the amount of fat without disagreeable symptoms, nor, indeed, does it produce any interference with the general health. Among the somewhat unusual cases that are reported is one by Burrall, where he treated a patient suffering from amyloid liver, and also from a fatty heart, with considerable success. So also Blackwood has claimed good results in the treatment of exophthalmic goitre. I believe, however, that in the manifestations of what is clinically known as scrofula—such as scrofulous ophthalmia,

sympathetic enlargement of the glands in neck and groins, cold abscesses, indolent ulcers, chronic skin affections—especially when combined with cod-liver oil, we can obtain surprisingly good results. Shoemaker has spoken of the value of this remedy in sciatica. Field has noted that it removes accumulations of serous fluids. Blackwood extols it in lumbago. I have found in cases of endocarditis, especially in cases of the fibrous variety, and in peri-arteritis, its long-continued use is apt to be followed by improvement.

While I have used this remedy with a great deal of satisfaction in many of the pathological conditions which I have here enumerated, I have been more especially interested in the results of the administration of the syrup of hydriodic acid in cases of rheumatism and in the diseases resembling it.

Craig treated sixteen cases of acute rheumatism, and at the time of the publication of his paper had yet to find a case where this remedy had been properly used and had failed to meet his expectations. It shortens the duration of the disease, relieves pain; it reduces the temperature and leaves the patient without heart complications, preventing exudations and organization of plastic material. I would regard the chronic rheumatic and rheumatoid affections as offering a crucial test for the efficacy of this remedy, and particularly the chronic and intractable cases that a physician to our city charity hospitals meets with, as demonstrating beyond a reasonable doubt the value of this remedy. If syrup of hydriodic acid will relieve the chronic rheumatics that we meet with in these hospitals, there exists no further necessity for proving its usefulness.

The cases which I have chosen to illustrate the use of this remedy were treated in Bellevue Hospital. For the careful notes I acknowledge my indebtedness to Dr. Cyrus J. Strong, of the resident medical staff.

Case 1: Chronic Rheumatism (arthritis deformans).—Dec. 18, 1891. G. B——, aged 29 years; born in Ireland; plumber by occupation.

Family History: Father rheumatic after his fortieth year. The rest of the family well and strong.

Present History: Has been in the United States twenty years, and plumber for same length of time. Was perfectly well till 19 years of age. At that time had an attack of inflammatory rheumatism in the right knee, following exposure to cold and wet. Next year had another attack and was in Bellevue Hospital for three weeks. Next year had still another attack, but was not then obliged to give up work. Two years ago his fingers began to stiffen at the second articulation, and at present hands present the characteristic deformity of arthritis deformans [see frontispiece]. Thumbs are not involved, and the first and third articulations are not absolutely ankylosed. He came into the hospital after being laid up in bed for two weeks. His neck is also stiff, but he has but little pain. Put on salicylate of soda and bicarbonate of potash, ää grs. xx at the hour of 9, 1, and 5, day and night.

Dec. 22d: Complains of more pain. The neck is very stiff. He complains of pains in forehead and occiput. He is unable to move his head at all or find any comfort in lying down. There is also considerable nausea and some ringing in ears. Above treatment abandoned, and he was given salol and phenacetin, ää grs. v at the hours of 9, 1, and 5, day and night.

Dec. 28th: He is still in pain; the neck is about the same, but the nausea has disappeared. Ordered quinine, grs. x at the hours of 9, 1, and 5, by day.

Feb. 25th: He complains of less pain, but the stiffness still continues and he sleeps very little at night. He is to return to the soda salicylate, same amount.

March 2d: Nausea and ringing in ears again present. All medication was omitted. He was directed to take the syrup of hydriodic acid, ʒ ss at the hours of 9, 1, and 5, day and night.

March 20th: Patient is more comfortable; the pain in neck is absent at times, so that he is able to sleep. From this date till discharged—May 1st—the patient continued to improve, and gradually recovered the full use of all joints except those of fingers, which were somewhat improved. Was in no pain when he left the hospital, May 1st, improved.

Case 2: Subacute Rheumatism.—April 9, 1892. B. G——, aged 38 years; born in Ireland; by occupation a laborer.

Family History: Negative.

Present History: Always well and strong until three years ago, when he had rheumatism in his right knee and was laid up one week. Has felt some discomfort in that joint most of the time since. Present attack came on Feb. 1st. He came into the hospital to-day, after suffering severely for two weeks —the left hip, knee, and foot, and right knee, being involved. Put on soda salicylate and potassium bicarbonate, ää grs. xx at the hours of 9, 1, and 5, day and night, with menthol dressings to joints.

April 12th: Treatment gave great relief, but caused nausea and cerebral symptoms, so changed to syrup of hydriodic acid, ℥ ss at the hours of 9, 1, and 5, day and night.

April 20th: Improvement less rapid than under salicylates, but condition is better. The joints not so much swollen and are very much less painful. Discharged May 2d, cured.

Case 3: Acute Articular Rheumatism.—Feb. 20, 1892. B. V.——, aged 24 years; born in Ireland; by occupation a domestic.

Family History: Negative.

Present History: Six years ago had an attack of rheumatism—her first illness. Was in bed three weeks, and had more or less pain for three months. Two years after had another attack; was ill two weeks in the Presbyterian Hospital. Present attack began Feb. 15th. Went to Presbyterian Hospital again, and was transferred to Bellevue Hospital on the 20th of February. She had severe pain in left shoulder and elbow and both knees. Put on soda salicylate and potassium bicarbonate, ää grs. xx three times daily, and menthol dressings.

April 8th: Treatment abandoned on account of vomiting. General condition much improved and pain greatly decreased.

April 10th: Same treatment was given again, with same result.

April 12th: Ordered syrup of hydriodic acid, ℥ ss at the hours of 9, 1, and 5, which was given till April 25th, when the patient was so much improved as to get up and be about the ward. The syrup was then given twice daily until April 29th, when she was again put on soda salicylate, grs. v, in capsules, which was given up on account of nausea, and the syrup adopted in place. She continued to improve till she was discharged on May 6th, improved.

Case 4: Gonorrhœal Rheumatism.—Feb. 17, 1892. J. K——, aged 43 years; born in Ireland; driver by occupation.

Family History: Father had rheumatism in later life.

Present History: No illness as a child, and no rheumatism before having gonorrhœa. In 1878, while suffering from a third attack of gonorrhœa, had rheumatism in middle joint of left index finger, which spread to neck, right arm, and finally involved nearly every joint before cure. This attack lasted nearly nine months, while the discharge continued but two months. In 1882 rheumatism returned shortly after having another gonorrhœa. Then his feet were first attacked. This attack lasted six months, but he was able to do work all the time. In 1883 another attack started in left knee and lasted six months. He was unable to work at all, as nearly all his joints were involved before cure. In October, 1891, his present attack came on after drinking heavily and contracting another gonorrhœa. The discharge lasted one month, it being cured in Bellevue Hospital. He went to work, and soon began to have pain in right foot, when he returned to the hospital with left hand, knee, and hip swollen and painful, the patient being nearly unable to move about. Put on soda salicylate and potassium bicarbonate, ää grs. xx at the hours of 9, 1, and 5, day and night.

March 2d: Patient violently nauseated, and complains of severe pain in head. Treatment changed to syrup of hydriodic acid, as there was no improvement. The dose was ℥ ss at the hours of 9, 1, and 5, day and night.

March 10th: The patient somewhat more comfortable. Menthol (5 per cent. in olive oil) dressings to joints. Nausea and cerebral symptoms have ceased; still there is marked swelling and tenderness in joints.

March 15th: Two blisters applied to left knee, which seemed to give some relief. Blisters were applied from time to time to this and other joints, with more or less success, till the actual cautery was used on knee.

April 14th: After this, patient felt decided relief, and has improved markedly on the syrup. Complains very little of pain in joints, though they are still much enlarged.

May 1st: Patient still improving; he walks about with some comfort, though left foot and ankle are swollen.

June 4th: Discharged cured. Patient is very much pleased with the syrup, and says it is the only medicine which has given him relief.

These cases were selected from the record books as average cases and average results from the use of the syrup of hydriodic acid. The hours chosen for administration of the remedy are the usual hospital hours, and all are not suitable for a remedy like this. Still the results are very satisfactory when compared with those met with after the use of salicylates, alkalies, and other preparations of iodine. Case 1 showed remarkable improvement. Case 2 is the average city-hospital rheumatism, as a rule entirely rebellious to treatment by the usual remedies. Case 3 is a similar case, which was transferred from another hospital on account of the acuteness of the attacks; here the value of the syrup in an acute exacerbation of a chronic rheumatism is seen. Case 4 illustrates the antiseptic value of hydriodic acid (Duroy). The result was an eminently satisfactory one, when one considers the tendency of the disease to become chronic in spite of all treatment.

In looking over the records of the cases which have come under my observation and in which I have used the syrup of hydriodic acid, I feel great satisfaction that I have obtained results equally as good as with the alkaline iodides, and far more pleasantly for the patient, and needing less watchful care on the part of the physician. The syrup of hydriodic acid has never, in my hands, given rise to acne, coryza, nor indeed to any intolerance on the part of the stomach, although I have increased the dose until the necessary effect was obtained. On the other hand, these effects are quickly and surely reached.

CONCLUSIONS.

1. In syrup of hydriodic acid we have a palatable and efficient method of administering iodine.

2. The dosage is under control. We can saturate the patient with iodine, yet iodism can be avoided.

3. The field of usefulness is greater than that of iodide of potash or any other alkaline iodide.

4. The failure of administration in former times was due to the impossibility of making a high-class pharmaceutical which should be of sufficient iodine strength and absolutely permanent; here the recent improvements in manufacture are of the greatest importance.

690 Madison Ave.,
New York City, Nov. 1, 1892

ABSCESS OF THE NASAL SEPTUM.

BY EDWARD J. BERMINGHAM, A.M., M.D.*

Abscess of the septum consists of an accumulation of pus between the cartilage and the deep layer of the mucous membrane covering it on either side. It may be due to the breaking down of a gumma in advanced syphilis, or to a depraved condition of the general system such as we find in certain strumous and anæmic patients, or following an exhausting illness, as typhoid fever. It is, however, usually of traumatic origin and follows a blow upon the nose. In the latter event it is due either to the resulting inflammation, to a fracture of the cartilage, or to the breaking down of a hæmatoma. When caused by a fractured cartilage, or when the proper treatment is too long delayed, we are likely to have perforation of the septum following. The affection is of rare occurrence, but should be recognized early and treatment promptly adopted to relieve the extreme suffering that it occasions, and to obviate the often disastrous results of burrowing pus.

The symptoms of septal abscess consist of pain and a sense of great pressure in the nose; complete occlusion of one or both nostrils, and consequent mouth-breathing; dryness and soreness of the throat; and a nasal twang to the voice. There is also severe headache, more marked over the frontal sinus. There may or may not be elevation of temperature, but there is always, when the abscess is fully formed, great restlessness and sleeplessness. The sides of the nose bulge; and the integument covering the nose, and the infra-orbital region and upper

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lip, are swollen and œdematous. In a traumatic case there may also be ecchymosis of the conjunctivæ, and the skin may be more or less contused and inflamed.

An examination of the nasal fossæ shows each to be filled to the muco-cutaneous margin with what appears to be an inflamed polypus. Occasionally the tumor, which consists of the bulging mucous membrane covering the septum on either side, protrudes beyond the margin of the nostrils. It is extremely painful to the touch; and before proceeding to a thorough examination, an application of a 20-per-cent. solution of cocaine muriate should be made to it, and five minutes allowed to elapse. We can then handle it readily, and will usually be able to detect fluctuation. A small probe passed between the tumor and the ala nasi will map it out and establish its identity with the septum beyond a doubt.

The treatment consists in giving exit to the pus by a free incision and thorough drainage. The opening should be kept open until all discharge ceases; and if the edges unite prematurely, a second incision should be made. The nasal cavities should be cleansed three or four times daily with an antiseptic solution, such as a 25-per-cent. mixture of glyco-thymoline, or Seiler's or Dobell's solution.

The narration of the following case—the only one which has come under the writer's observation—will give a clinical picture of the affection:

A boy 11 years of age presented himself for treatment two weeks after an injury to the nose, caused by falling prone on the pavement and striking on the nose. A slight abrasion of the integument healed in a few days, but some swelling of the nose, eyelids, cheeks, and upper lip remained. These parts were also painful upon pressure. The pain in the nose increased in severity from day to day, and at the end of ten days began to throb and to extend upward to the frontal sinus. Headache, restlessness, and sleeplessness now supervened. It was at this time, ten days after the injury, that he first noticed inability to breathe through the nostrils; and for the four days next following, before seeking professional aid, the swelling in the nostrils steadily increased, and with it the local pain, headache, and general disturbance.

An examination of the parts fourteen days after the injury showed swelling of the nose externally, with œdema of the upper lip and face. The anterior nasal fossæ were filled with what at first glance appeared to be an inflamed polypus blocking each nostril, and extending about one-sixteenth of an inch beyond the margin of the nostril. It was red, hot, and extremely painful upon pressure—so painful, in fact, that it was impossible to pass a small silver aneurism-needle between it and the ala nasi. Nasal twang to voice. An application of a 20-per-cent. solution of cocaine permitted an examination with the probe, and the identification of the presenting tumors with the septum was evident. Fluctuation doubtful. A free incision was made with a bistoury on the right side, and about one drachm of thick yellow pus evacuated. Similar incision on left side did not give vent to pus. Considerable thickening of mucous membrane remained, and the breathing was not much improved, but there was marked relief to the throbbing pain and headache. Three days later the swelling in the left fossa had completely subsided; but that in the right still persisting, and the edges of the incision having united, the bistoury was again used, and released about twenty drops of thin pus. The parts healed after this without an unfavorable sign. The thickening of the mucous membrane over the septum in the right fossa remained for about a week, but gradually disappeared, the parts having been kept cleansed by a non-irritating antiseptic wash.

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THE PERIOD OF INCUBATION IN DIPHTHERIA.

BY M. B. DWIGHT, M.D.

Some years ago, while practicing medicine in Jersey Shore, Pa., I encountered an epidemic of diphtheria that enabled me to observe some features of the disease which I desire to present for consideration in this paper. I particularly wish to speak of the period of incubation in diphtheria. The following data I take from my record of visits made at that time:

In July, 1884, two children, a boy and a girl, aged respectively 9 and 11 years, inmates of a soldiers' orphan school, made a visit to their relatives living in Jersey Shore. They first visited a family in which were three children. Diphtheria soon followed. I was not called to these cases, but saw them several days later in consultation. In the meantime I had been called five miles distant to see some cases of diphtheria, and found the orphan-school children had been there to visit. At every home visited by these children diphtheria followed. I attended all the cases in this epidemic. By describing the course these children took and the country through which they went, it can be seen how accurately the period of incubation could be traced.

Upon the appearance of diphtheria in the family first mentioned, the visiting children went to a relative residing five miles in the country, at a place known as "Up Pine Creek." This was where I was first called. The vicinity is a narrow valley with high mountains on each side. All the people dwell in the line of the valley. The houses are from a quarter of a mile to two miles apart. There were five children in the family where the orphans stopped; they arrived the 24th of July, in the evening. Late on the evening of the 26th two of the children visited were attacked with sore-throat and fever. The next morning I was called, and found them afflicted with diphtheria. These cases being the first of the epidemic I had seen, I could not account for the origin of the disease until, upon inquiry a day later, I found that the orphan-school children had been there. By this time, however, they had left and gone further up Pine Creek. Two days later I was called four miles further up the valley to see a family with seven children, wherein there was one case of well marked diphtheria. The two orphan children had separated, the girl going to the house just mentioned and the boy stopping at a house about half a mile from there. The boy only remained over night, and joined his sister the next day. Where he had stopped were two children; only one of these had diphtheria—the one he had slept with. By this time I recognized that the cases of diphtheria all showed symptoms of the disease at periods varying not over one or two hours from forty-eight hours after coming in contact with the orphan-school children. I was not able to meet the orphans, owing to their quick departure to avoid me. They retraced their journey directly back toward Jersey Shore, a distance of two miles. When returning home, I stopped where they were said to be, and found they had only remained about two hours. There were several children in this family. I informed them they could expect diphtheria in about forty-eight hours. My information was not well received, and they refused to accept medicine which I wished to leave, saying I was injuring the children's visit by attributing the cause of the outbreak of diphtheria to them. Two days later I was called to see this family and found two cases of diphtheria, one patient being the mother. After inquiring for the orphan children, I found they had gone past Jersey Shore and crossed the mountains into Nippenose Valley, a distance of fifteen miles. The next morning I drove to the house where I was told they had gone, and found them.

They denied having had diphtheria, but their throats had a suspicious appearance. I predicted an outbreak of diphtheria at this place within forty-eight hours. The prediction was verified by my being called to attend some cases two days later. I succeeded in having the orphan children kept at this house for the remainder of their visit. There was no extension of the epidemic to any families not visited by these children, except two families, and they had come in contact with the families afflicted before they could be warned.

Nearly every child in these families had either mild or severe attacks. In every case I was able to place the period of incubation at forty-eight hours. The number of cases treated was twenty-one. But two of the patients died, and they were the obstinate ones who fought against medicine and treatment. All my patients used a gargle, every hour or two, of strong chlorine-water. A teaspoonful of the same medicine was given internally. I have noticed that the use of strong chlorine-water as a gargle several times daily acted as a decided prophylactic.

From this experience I am inclined to think that where the period of incubation in diphtheria has been thought to vary from forty-eight hours the germ has not been deposited in the throat of the subject, but has been retained in clothing or some other substance until forty-eight hours before the attack of diphtheria has made its appearance.

FREE INCISION OF ABSCESS OF OSTITIS OF HIP; AND CLOSURE WITHOUT DRAINAGE.

BY H. AUGUSTUS WILSON, M.D.*

I will in this paper refer only to my cases in private practice in preference to my hospital experience, because these cases were in a more favorable condition for operation, and because it was possible to keep them under control in a more satisfactory manner, and I was less likely to lose sight of them. My hospital experience in similar cases is far less satisfactory, and I regret that I cannot at this time give those statistics in addition to those contained in this paper.

I am convinced that the occurrence of an abscess of any considerable size is generally evidence of neglect, and that its growth to a size to raise the question of the advisability of its evacuation is a still further error. The neglect of early recognition of the malady and the enforced postponement of rigid immobilization render necessary the consideration of the question now under discussion.

In view of the well recognized facts that spontaneous resolution by absorption does take place in favorable cases, and that even after spontaneous rupture of an abscess the resultant sinus sometimes does ultimately close, it might appear to be adding an unwarranted risk to operate at all. But upon the other hand, the occurrence of the abscess being caused by neglect, and the doubt that must exist as to the possibility of obtaining a final favorable result, even with the employment of the desirable forms of mechanical rigidity of the joint, favors the application of remedial measures of an operative nature which are based upon sound surgical principles. The great diversity of opinions, even among orthopædic surgeons, as to the expediency of operative interference in hip abscess, is evidence, first, that operative procedures alone never cure in this condition; and secondly, that the scientific use of mechanical principles alone frequently accomplishes that which can be obtained in no other way. Until the recent introduction of asepsis and antisepsis, the evacuation of hip abscess was followed by no better results than those obtained by spontaneous rupture (indeed, not infrequently by not as good results). In those cases that did not succumb by amyloid degeneration or fatal tubercular diseases elsewhere, there was almost invariably a sinus of nearly a lifetime duration. At the prescnt day the successful accomplishment of a cure of hip abscess, by free incision, depends upon the thoroughness with which aseptic precautions are observed. I am convinced that where failure has occurred it has been largely due to incompleteness in antiseptic precautions, and I believe that it would be far better not to open such an abscess when for any reason the most strict asepsis and antisepsis cannot be obtained and maintained. I can see no good reason for waiting for an abscess of the hip to reach the point of rupture before resorting to surgical interference, because at that time there is not only a natural increase in the size of the abscess accumulation, but the original site of the bone origin has had everything to favor an increased destruction. The abscess wall has become thin, and tends to a non-union at that point, leaving the much-to-be-dreaded sinus; the constitution will have become depraved from the presence and attempt at absorption of so great a quantity of deleterious material; and it is not at all unlikely that bone excision is so frequently indicated because of the great extent of erosion produced by the delay in evacuation. The proportion of cases of hip disease that have abscesses is variously stated as being from 50 to 75 per cent.

The London Clinical Society's committee in 1880 reported 401 cases of hip disease, of which 69 per cent. developed abscesses in the course of a few years.

Cazin* reports 80 cases of suppurative hip

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* Bradford and Lovett: "Orthopædic Surgery," p. 294.

disease treated in a hospital at Berck. Fifty-five per cent. were cured; 12½ per cent. died; 25 per cent. were not cured; 7½ per cent. were improved. In Alexandre Hospital, London, in 260 suppurating cases, 33½ per cent. died; 42 per cent. were cured. Hebern* classifies results obtained in his hands. Of those not operated upon in three years, 19 per cent. recovered, and 15 per cent. died; of the remainder, 26 per cent. had recovered at the end of the fourth year, and 17 per cent. had died; and of those who began the fifth year alive but not well, 24 per cent. recovered before the close of the year, and 21 per cent. died.

Taking all the cases, those operated upon and those not, at the end of five years 13 per cent. were without operation; 37 cases were resected, with a mortality of 51 per cent.; 11 per cent. had been amputated, with a mortality of 60 per cent., and 29 per cent. had remained not well.

Senn, in his work on "Tuberculosis of the Bones and Joints," says (page 448): "A suppurating hip-joint in the adult warrants a grave prognosis. Anæmic patients and patients suffering from tuberculosis of other organs, or from other serious complicating disease, are bad subjects for operative interference;" and again (page 449): "The more conservative operations on the hip-joint, in the operative treatment of tubercular affections, that are now gradually displacing typical resections, will yield more satisfactory functional results, while the thoroughness with which osseous foci, the disease capsule, and infected para-articular tissue are now being removed, will be less frequently followed by local recidivation."

Lovett and Goldthwait† say that in every case of abscess of the hip treated in the Children's Hospital of Boston, from 1883 to 1887, that had been subjected to aspiration, whether followed by injection of iodoform or not, subsequent free incision became necessary. In the same hospital, from 1884 to 1888 inclusive, there were 370 cases of hip disease, of which 70 were suppurating.

Dr. R. H. Sayre‡ says: "It seems to me that the cases reported as dying of amyloid disease and general tuberculosis are an additional argument in favor of more thorough removal of diseased tissue before the general system has become exhausted beyond hope of recovery."

The procedures that I have found to give the most satisfactory results are those by free incision, extending the entire length of the abscess, evacuation of the contents, and sealing of the wound. The day prior to the operation the field is as scrupulously prepared as is customary in surgical procedures. The incision is made at first only large enough to permit the contained pus to slowly escape; as soon as it has ceased to flow, the incision is increased to the full extent of the cavity. Peroxide of hydrogen (medicinal) is now thrown in in a small stream until ebullition almost ceases, and the accumulation of detritus is then thoroughly washed out by means of a stream of warm 1:1000 bichloride-of-mercury solution, from a fountain syringe. By the use of the Barker-Willard irrigating curette, the entire pyogenic membrane is carefully and thoroughly scraped, and any shreds of fibrous tissue remaining are removed by scissors. It is now possible to trace the site of the original ostitis, and when found, if not too extensive, its removal is frequently easily accomplished with a gouge.

The difficulty experienced in obtaining a sterile and at the same time an efficient emulsion of iodoform in olive oil, has induced me to dust powdered iodoform over the entire surface after it has been carefully dried with gauze sponges. The edges of the wound are brought in contact and so held by silkworm-gut sutures, and the entire surface is covered with a thick fold of aseptic gauze, the incision having been covered with protective.

Enforced immobilization is secured with a long padded splint reaching from the axilla to the malleolus, aud retained in position with plaster-of-paris bandages applied to the leg and the trunk, or by some form of portable bed or fixation apparatus. At the expiration of one week to ten days the stitches are usually removed, if primary union has been obtained. The external dressings and fixation apparatus are readjusted and main-

*Ibid, p. 325.

† Transactions of American Orthopædic Association, vol. ii, p. 83.

‡ Op. cit.

tained for a period of three weeks more. The subsequent procedure is enforced mechanical immobilization of the joint, either in bed or by apparatus, as the individual requirements of the case may indicate.

While the statistics I have to offer cover a comparatively small number of cases, they may be of use when added to others, and I therefore give them. The cases operated upon by me by the method described number twenty-four. There were sixteen girls and eight boys. Eighteen were upon the left side, and six were upon the right. The abscesses had been observed by the patient, parent, or attending physician as follows: For 3 months in five cases; 7 months in three cases; 8 months in four cases; 10 months in six cases; 1 year in four cases; 2 years in two cases.

In five cases reaccumulation occurred, and subsequent evacuation was required. In three of these there has been no second reaccumulation, although several months have elapsed. In one case a persistent sinus exists. In one case infection took place from a stitch-wound abscess, when catgut sutures were employed. In fourteen cases more than one year has elapsed, and in eleven of this number the original cicatrices have remained firm and unbroken; three were reopened for reaccumulation, and the second cicatrices have not yielded six months after the second operations. In ten cases, less than a year has elapsed since the operation, of which number nine have remained closed, and in one a persistent sinus is now present. In eighteen cases the bone origin was not found. In three it was found to be of an extensive character, involving the head of the femur and acetabulum. In four cases the deposits were found to exist in the femur, and were of small size. In two cases the site was found in the rim of the acetabulum and quite small in extent. In addition to the above, there were a number of suppurating cases upon which I did not consider operation advisable. Some of them were upon the point of spontaneous rupture; the overlying skin was thin and very tense, and the abscesses of large size. In other cases recourse was had to mechanical fixation without operation. In view of the distressing persistent sinuses that have so frequently followed attempts to avoid the radical procedure here described, I have felt that in future I should be inclined to extend the range of cases upon which I would consider the operation advisable.

I have frequently observed spontaneous resolution without rupture of an abscess of considerable size, and have seen many cases where the spontaneous closure of a long-standing sinus has occurred; but these were under the most favorable circumstances, and I can scarcely doubt they would have obtained a more speedy cure if these abscess-accumulations had not been left so largely to themselves. Upon the other hand, the presence of persistent, and often multiple, sinuses is of such frequent occurrence as to lead oftentimes to the employment of illusory measures of relief—measures which, while having the appearance of seriousness, fall short of the treatment demanded. The unsatisfactory results obtained in the treatment of hip abscess may be traced:

a, to delayed operation;

b, to imperfect measures of operating;

c, to squeezing the abscess to evacuate the contents;

d, to employment of the drainage tube;

e, and most important of all, to the failure to employ prolonged and absolute fixation of the hip-joint.

(*a*) In delayed recourse to operative procedures the extensive destruction of bone tissue prevents the closure of an abscess cavity by a constantly renewing accumulation. (*b*) The imperfect measures of operation are those that remove but a part of the sac contents or wall, or where the cavity to be closed is too large to permit a thorough cleansing of the parts, or where the cavity about to be closed is filled with some fluid which, in escaping through the incision, tends toward the production of a sinus. (*c*) In squeezing the parts surrounding an abscess to assist in more rapid evacuation, the already inflamed tissues are bruised; and upon this point I can cordially indorse every word that Phelps* said when discussing this same subject in 1889. He deprecates the squeezing out of the pus, and says that "if the abscess

*Transactions of American Orthopædic Association, vol. ii, p. 92.

is properly opened at first, there will be no necessity for doing this." (*d*) With reference to the employment of the drainage tube, I cannot agree with Dr. De Forrest Willard† with reference to the necessity for its use. Dr. Willard (as cited above) advocated the gradual withdrawal of the rubber drainage-tube, believing that it assisted in effecting a thorough cure, and that this was of far more importance than obtaining primary skin union. My own experience is that the employment of the drainage tube is invariably followed by a sinus which but rarely closes spontaneously. R. W. Lovett, in his classic prize essay, entitled "The Ætiology, Pathology, and Treatment of Diseases of the Hip Joint," 1891, p. 120, says: "The experience with regard to the drainage tube at the Boston Children's Hospital is of interest. Of forty-three cases of abscess of the hip operated on between 1884 and 1888, one is recorded as having healed within six months, and about half of the sinuses healed within periods varying from one to two years, the rest remaining open almost indefinitely. These cases were all thoroughly cleaned out after free incision, and were either packed with gauze or (more commonly) drainage tubes were inserted and antiseptic dressings employed. The site of the drainage tube was almost always the site of a sinus, which persisted for a varying period of time." (*e*) In the failure to employ prolonged and absolute fixation after the evacuation of an abscess, there is an entire disregard of the fact that by this means alone abscesses have been arrested in their growth, and that absorption has thereby been induced. If these are facts—and no one can doubt the statements made by Shaeffer, Judson, and other orthopædists who deprecate the resort to surgical measures—then the employment of immobilization will materially assist in the recovery after the evacuation of an abscess, and in the prevention of reaccumulation.

MY FIRST CASE.

BY G. A. WILLIAMS, M.D.

My first case of obstetrics was somewhat unique, and of course made quite a lasting impression upon me. I was not yet a graduate, but I had attended two sessions and considered myself quite skillful and scientific. My preceptor took me in charge one day, and introduced me to an old colored lady who was about to be confined. This lady carried considerable weigh with her—I believe she weighed about three hundred pounds—and, as the weather was very hot, the case proved to be quite interesting. I remembered having read somewhere that the doctor should sit down quietly and read a book, wait for matters to develop, and not be too meddlesome. I found an old almanac, but could not read a word of it, for I had an attack of globus hystericus; and as I was trembling and gasping for breath, two old colored ladies came in—one of them was Ol' Auntie Smith, who was known as a great nurse. Ah! but wasn't this an angel's visit? The patient now had strong pains, and the nurse said: "Doctah, is you gwine to try a pain?" Never having seen a case before, and not understanding her, I tried to look wise and answered: "Bimeby." In a short time the labor was more advanced, and the old nurse called upon me again: "Please, doctah, yo' bettah 'zamine dis yer lady." Accordingly I passed my hand somewhere in the region of the vulvæ, and suddenly there was a tremendous gush and splashing sound which almost demoralized me; still I congratulated myself upon my bravery in this supposed case of "terrible hæmorrhage," and, not wishing to alarm the bystanders by exposing my ghastly, blood-stained hand and arm, I remained petrified, as it were, in the same position. Just then the old nurse said: "Doctah, I reckon de wattahs is done broke, ain't dey?" Ye gods! what a relief this was to me! I suddenly remembered that there was such a thing as the rupture of the membranes, and, withdrawing my hand, it is needless to say I had more respect for that old nurse than for any lady I ever saw. The baby was born immediately, and, with some encouragement and instructions, I recovered myself sufficiently to tie the cord. The baby was placed in a cradle, and the nurse exclaimed: "Yo' pufessional gen'lmen ginally waits 'bout a half ouah fur de afterbuf, don't you, doctah?" "Yes," said I, but, owing to the great strain

† Transactions of American Orthopædic Association, vol. ii, p. 146.

upon my nerves, the reaction had now come on and I hadn't the remotest idea of what the old nurse meant. We didn't have to wait, however, for the afterbirth came away in a minute or two, and the patient herself exclaimed: "It's done come, Auntie; it's done come." The old nurse removed the afterbirth and soiled clothing carefully, and took a nice clean band and applied it snugly around the patient. And this was the end of one of the easiest and most natural cases I ever attended. While washing my hands in an adjoining room, I overheard the old nurse saying: "Dat ar young gen'lman's a mighty fine doctah; he 'minds one ob de doctahs down Souf, wen I lived in ole Virginny." These good old souls have long since passed away and crossed the river, where they are now resting under the shade trees.

Bay City, Mich.

TUMENOL IN THE TREATMENT OF ECZEMA AND IRRITATION—ITS ORIGIN, NATURE, AND PROPERTIES.

A very considerable proportion of modern agents for the treatment of skin diseases depend for their usefulness upon the property of abstracting oxygen from all substances, capable of yielding it, with which they come in contact. The reason why this reducing virtue is of such value in restoring the diseased skin to a healthy condition, or, perhaps one should say, in enabling the skin to resume its natural functions, is not perfectly clear.

In those diseases which are of parasitic or bacterial origin it is assumed that the remedy, by withdrawing the oxygen from the superficial layers of the skin, renders it unsuitable as a soil for the micro-organisms to grow in, and so cuts short the morbid process.

In this class of reducing agents we must include tumenol, a new remedy to which the attention of the medical profession is called with the more confidence since it is not recommended as a panacea in dermatology, but simply, at least for the present, against two abnormal conditions of the skin.

THE ORIGIN AND NATURE OF TUMENOL.

Under the name "bitumen" (from the last two syllables of which "tumenol" is derived), mineral pitch or oil is mined and worked in many different parts of the world. Sometimes the crude material is solid (asphalt), sometimes it is liquid (petroleum). The former variety is subjected to dry distillation, yielding benzol, naphtha, paraffin, and various other liquid and gaseous hydrocarbons; the natural occurrence of such a process is believed to give rise to petroleum —a distillate from nature's laboratory.

The petroleum obtained naturally or by distillation is purified for various purposes by successive treatment with diluted sulphuric acid, alkali, and water. In all mineral oils there is a certain class of unsaturated hydrocarbons which are acted upon by strong sulphuric acid, but nevertheless are not impurities; the parent substances of tumenol were found in these unsaturated hydrocarbons as contained in the distillate of a bituminous mineral from the Messel mine near Darmstadt in Germany.

THE METHOD OF ISOLATION

consists in purifying the mineral oil from creasotes and acid bodies, and from bases (pyrrol and the like), and then treating with concentrated sulphuric acid. Sulphurous acid gas is given off, and a dark-colored acid syrup separates which consists of a mixture of sulphone and sulphonic acid; this, when washed with water and solution of common salt, forms tumenol.

By separating the sulphone from the sulphonic acid two other forms of the remedy are obtained, called respectively

TUMENOL OIL AND TUMENOL POWDER.

The sulphone or oil is a viscid, dark-yellow liquid, freely soluble in ether and benzol; it is insoluble in water, but the aqueous solution of tumenol, sulphonic acid, or powder takes it up, acquiring at the same time a strongly bitter and aromatic taste.

The sulphonic acid left in aqueous solution after the sulphone has been extracted, forms, if entirely freed from water, a dark-colored powder of peculiar, feebly-bitter taste. The powder is readily soluble in water, and the solution may be evaporated to a syrup consistence without separation. We shall see that in most cases this concentrated aqueous solution is preferable to the dry pulverulent form.

The most important property of these preparations is believed to be their marked reducing powers. *Per* salts of iron are reduced by them to *prote* salts, permanganate of potassium into an oxide of manganese, and corrosive sublimate into calomel.

This ready oxidibility is ascribed to the unsaturated character of the compounds; a positive evidence that this is so, is afforded by the observation that they take up the halogens, chlorine, bromine, etc., with great eagerness. In the case of the sulphone it has also been noted that it reduces a further quantity of sulphuric acid when treated with it, sulphurous acid gas being evolved.

THERAPEUTIC PROPERTIES AND USES.

Tumenol is not a new, untried remedy, but has been already employed for nearly two years by Professor Neisser, of Breslau. He used tumenol itself, which is soluble in water though with difficulty, the tumenol sulphone, and the sulphonic acid. The salts obtainable from the last-named (*e. g.*, sodium, potassium, ammonium, and zinc tumenol sulphonates) have not yet been tried in medicine, but probably will before long come under notice.

The remedy was employed in a number of forms, such as pure, in simple dilution, tinctures, paste, ointment (for formulæ see page 111), powder, and plaster (using soap- and salicylated soap-plaster as a basis).

According to Professor Neisser's experience, the useful properties of tumenol—largely due, it seems, to the sulphonic acid—are as follows:

1. Moist eczema, when not too violently and recently inflamed, is, on the application of tumenol, rapidly dried up, and a hardened layer of epidermis forms over the affected area. This drying action is very serviceable in burns of the first and second degree.

2. The preparations do not augment or produce irritation or inflammation unless the skin be specially liable to irritation. Save in the most recent stages of eczema, tumenol has an alleviating effect upon inflammation, hyperæmia, and exudation.

3. Tumenol has a very marked action in the relief of itching, not only in eczema or in parasitic forms of dermatitis, but also—though less pronounced—in forms of prurigo and pruritis. In the itching of eczema, particularly of recurrent forms, with fissures around the anus, scrotum, etc., it proves of excellent service.

4. Tumenol is useful and often very valuable as a dressing for ulcerations, whether superficial or deep, if they are not too moist or purulent, and there is not too great loss of tissue.

5. Tumenol has no general action upon the organism. It was given subcutaneously to animals (dogs and rabbits) for weeks without producing any local disturbances or any appreciable effect upon the general well-being. Human beings also took fairly considerable quantities internally in gelatin capsules without any recognizable disturbance or unpleasant effects.

PRACTICAL MEDICINAL APPLICATIONS.

Tumenol was used in the form of moist compresses (saturated with a 2- to 5-per-cent. solution) in acute recurrent eczema of the hands and face, or in the acute relapse of chronic eczema of the thighs. The author had previously used aluminium acetate solution (1:8), but found that tumenol solution was superior since it did not macerate the skin but converted it into a dry protective covering. At the same time the itching was greatly relieved.

As a paste (see p. 111) tumenol proved very useful in superficial ulcerations (lupus, etc.), in impetigo contagiosa, and in two severe cases of pemphigus. The incipient pustules dried up, and a hard layer was formed over the exfoliated surface; itching was very manifestly alleviated, especially by the tumenol-oil paste.

In the dry and squamous forms of eczema the tinctures (see p. 111) proved more useful and convenient. They also did good service in multiple erosions due to irritation and scratching.

Moist and vesiculous eczema was painted with simple undiluted tumenol-oil (sulphone), generally with very prompt success.

Ulcerated surfaces were dusted, sometimes with finely powdered tumenol sulphonate (previously slightly greased), and sometimes with a mixture of tumenol powder and zinc dusting powder.

To sum up, the experiments hitherto made show the value of tumenol:

1. As a drying agent which reduces inflammation and effects the covering of the affected area with a horny epidermal layer; this action is specially seen in moist eczema, in erosions, excoriations, and superficial ulcerations.

2. In forms of pruritus.

In eczema its best results are produced upon the superficial, "catarrhal," desquamative forms, both acute and chronic.

FORMULÆ AND MODES OF APPLICATION.

Tumenol can be applied to the skin in the undiluted condition without any ill effects. The sulphone or "oil" has often a very beneficial result when applied *per se* to moist and vesiculous eczema. The powder was also sometimes used alone in the treatment of ulcerated surfaces.

Aqueous solutions of the sulphonate, 2- to 5-per-cent., were employed for saturating compresses.

The paste was made of 5- to 10-per-cent. strength, the tumenol being added to the zinc paste already prepared, or tumenol powder was substituted for the usual pulverulent ingredients. The consistence of the paste is adjusted according to the kind of case treated.

Prof. Neisser says: "The properties of these forms of paste correspond for the most part to those of tumenol itself, and will certainly be the first to commend themselves to the experimenter. Whether the paste were made with tumenol or tumenol sulphone was not altogether a matter of indifference; tumenol oil is more bland than tumenol. We convinced ourselves repeatedly of the superiority of tumenol paste over the simple zinc preparation."

The tinctures were prepared as follows:

℞ Tumenoli, 1 drachm.
Æther sulphur.,
Spirit. vini rectific.,
Aqua destil aut glycerini, } ää 3 drachms.
M. D. S. Tumenol tincture.

The aqueous preparation when painted on the skin dries readily and completely; that containing glycerin leaves behind a somewhat sticky film suitable for holding a dusting powder.

The ointment used is made as under:

℞ Tumenoli, 1 to 2 drachms.
Zinci oxidi,
Bism. subnitr., } ää 1 drachm.
Ung. lenient.,
Ung. simplic., } ää 1 ounce.
M. Ft. ung.

Unguentum leniens corresponds to the English cold cream. Other ointments were prepared with vaselin, lead ointment, or other common base.

CLINICAL NOTES ON ESENCIA DE CALISAYA.

Dr. S. R. Wooster, Grand Rapids, Mich., writes under date of August 1, 1892:

In June I had what might be called a typical case for the trial of Esencia de Calisaya (Mosquera-Julia Co.)—a lady patient, who has suffered from nervous prostration, insomnia, marked malaria trouble, etc., etc., resulting in much general debility, with impaired appetite, feeble digestion, constipation, menorrhagia, etc. This patient would not tolerate quinine in any form. She had not been able to do any work for the last year. She took the calisaya as directed, continuing its use for thirty days without cessation. She soon began to eat and sleep better, and, notwithstanding the prostrating influence of the severe hot weather, has gained strength and flesh, and is now again at work, her occupation being that of book-keeper or accountant. I have used extensively the Elix. Phos. Ferri, Quin. et Strychnia in cases of this nature, and, while I think that a good remedy, I think the Esencia de Calisaya much better. It is more pleasant to take and better tolerated by the stomach, and I think it strongly counteracts the malarial influence.

Dr. Sydney A. Dunham, Buffalo, N. Y., writing July 18, 1892, says:

Recently, being in a quandary as to the best tonic to give a patient suffering greatly from anorexia, general weakness, and mental depression—the result of her leaving off the use of opium, to which drug she had been addicted for some time,—I prescribed Esencia de Calisaya, in teaspoonful doses. The best stimulant tonics at my command had been used, but the patient says the new medicine was superior to anything she had previously taken. She finished taking the calisaya (12 ounces) about three weeks ago, and has required no medicine since, having gained in flesh, and feeling better than for years.

Correspondence.

NEW YORK LETTER.

How to Deal with Irritable Nipples and their Immediate Sequelæ—A Case of Cæsarean Section—A Marble Operating-Theatre.

[Special Correspondence of the Medical Age.]

At a recent meeting of the Metropolitan Medical Society, Dr. S. Marx read a paper on "The Treatment of the Nipples in the Gravid and Puerperal States." The paper brought out many new points in regard to this question, and showed wherein the teachings of many prominent authors were wrong. Dr. Marx said that as early as the second month of pregnancy the nipple becomes erectile, larger than usual, and sensitive; the epidermis of the nipple and of the directly adjacent part of the gland thickens and becomes covered with branny scales, which are particles of dried colostrum from the gland. These scaly particles are nature's protection to the nipple from clothing, corsets, or external irritation of any kind. The friction, massage, and manipulation which are done as a prophylactic against sore nipples remove this protection, and consequently the nipple becomes eroded. If this covering is entirely rubbed off, the nipple becomes red, puckered, painful, fissured, and excoriated; while if these scales are left alone, the papillæ under them become hardened in the same way in which a wound heals under a scab. Friction and fallacious rubbing for the purpose of removing this layer are as injurious to the underlying tissue as is the removal of a scab in its early development to the tissue beneath it.

Dr. Marx referred to his experience when an interne in a maternity hospital, and said that among the poor and unclean, half-starved, and ignorant women received, it was rare to see a sore breast or nipple; this formed a striking contrast to the women met in private practice. The explanation of this difference is that the hospital patients knew nothing about the so-called prophylaxis, and hence did not meddle with nature's protector of the nipple.

The Doctor said that when a woman asks him what she shall do to prevent the occurrence of sore nipples he tells her to stop wearing corsets, protect the nipple from external irritation by putting a pad of absorbent cotton over it, and to forget she has a nipple. If it becomes inverted, draw it out three times a week; if tender and sore, apply a 10-per-cent. ichthyol-lanolin salve, which will heal it perfectly in a few days.

The point was dwelt upon that sore nipples are the principal cause of mastitis; that through the lesions in the nipple septic germs gain access to the glandular structure. The prevention of sore nipples prevents mastitis. But when sore nipples develop, treat them by supporting the breast, leaving an opening in the bandage for the nipple; diminish the frequency of nursing; apply a 5-per-cent. solution of cocaine to the breast before nursing, and when there are no fissures apply ichthyol-lanolin ointment. If there be fissures, cauterize and apply aristol or balsam Peru.

When mastitis develops, Dr. Marx applies a firm cheese-cloth bandage around the breast, permits of no massage or rubbing, bandages the corresponding arm to the side, and applies to the breast iced lead-water, giving the patient potassium iodide and sal Rochelle internally.

***

Dr. Dudley, Professor of Gynæcology at the Post-Graduate, delivered a woman by Cæsarean section a few days ago. The woman had gone to within four days of full term; she had an equabiliter justo-minor pelvis, which measured barely 2½ inches in the conjugate diameter. She had been pregnant once before, and craniotomy had been performed. While Cæsarean section involves the patient in greater risk than does craniotomy, yet it was considered that one child had been sacrificed for the woman, and that, knowing her incapacity of bearing a living child, she had again exposed herself to the repetition of pregnancy, thus entitling the child to a chance. The operation was a success; a 7-pound child was delivered, and the mother's temperature has at no time since the operation reached more than 100° F. At the present writing, both mother and child are doing well.

***

New York is the possessor of the finest operating-theatre in the world. The struc-

ture was completed two months ago, at an expense of a quarter of a million. It was planned under the direction of Prof. Chas. McBurney, who spent several months during the past summer in visiting the various hospitals of Europe and accumulating ideas which culminated in the construction of the Sims Operating Theatre. The funds were bequeathed by Dr. Marion Sims. The building is in connection with Roosevelt Hospital. Externally it is a humble-looking affair, and one would wonder how so large a sum could have been expended in its construction; but when once inside, the observer wonders how the building could have been so elegantly furnished for such an amount. The interior is of pure marble, and consists of nothing but the amphitheatre and a few small rooms for anæsthetizing and for instruments. There are 300 seats, so arranged that from any one of them the spectator can gain a perfect view of the pit. At Prof. McBurney's clinic, which he holds in the building each Saturday afternoon, the operator, his assistants, and the male and female nurses, are dressed in a complete suit of white; and with the famous surgeon's fluent language, and the richness and taste of the surroundings, the clinic apparently partakes more of the nature of an entertainment than of a piece of surgical education.

New York City.

PRELIMINARY MANIFESTO OF THE SECTION OF NERVOUS AND MENTAL DISEASES OF THE PAN-AMERICAN MEDICAL CONGRESS OF 1893.

To the Editor of the MEDICAL AGE:

DEAR DOCTOR—I take pleasure in transmitting herewith a manifesto of the preliminary organization of the important Section of Psychiatry and Neurology of the forthcoming Pan-American Medical Congress.

Valuable papers have been promised from distinguished *savants* in neurological and psychological medicine, but many more are desired and desirable. The Spanish, French, and English languages will be spoken in the Section.

Physicians who may desire to identify themselves with this Section of the Congress are requested to do so at once.

Every effort is being made to make the meetings of the Section on Diseases of the Mind and Nervous System both scientifically profitable and socially pleasant; to exhibit the progress of neurology and psychiatry especially, and to promote a closer confraternity between the profession of the North and South American States.

Every physician on this continent of America, North or South, is hereby cordially solicited and welcomed to join in the meetings of this important Section of the approaching Pan-American Medical Congress; and it is hoped by unity of effort and cordial coöperation to make this Section second to none in the Congress in fruitful results to Pan-American psychiatry.

Let us come together from all the Americas, and make the coming convocation one long to be remembered for its scientific and social benefits to all.

C. H. HUGHES,

Executive President Section on Diseases of the Mind and Nervous System.

St. Louis, Jan. 12, 1893.

INFORMATION REGARDING GLYCOZONE.*

Glycozone is a stable compound resulting from the chemical reaction which takes place when c. p. glycerin is submitted, under special conditions, to the action of fifteen times its own volume of ozone, under normal atmospheric pressure at a temperature of 0° C.

The presence of water (and other foreign substances) in the glycerin changes the nature of this reaction, so that instead of producing glycozone we obtain formic acid, glyceric acid, and other secondary products having deleterious effects upon the animal cells.

Glycozone, being hygroscopic, must be tightly corked, so as to avoid being deteriorated by the moisture contained in the atmosphere.

Although glycozone absorbs water readily, it does not deteriorate when kept at a temperature of 110° F. as long as it retains its proper anhydrous condition.

*In answer to a correspondent of the AGE inquiring concerning glycozone, the following facts are furnished by the manufacturer of this product.

The therapeutic properties of glycozone and Marchand's peroxide of hydrogen (medicinal) differ in the following particulars:

Peroxide of hydrogen (medicinal) instantly destroys the morbid elements of diseased surfaces of the skin or of the mucous membrane with which it comes in contact, leaving the tissues beneath in a healthy condition.

On the contrary, glycozone acts more slowly, but is not less certain as a stimulant to healthy granulations. Its healing action upon diseased mucous membrane is powerful and harmless in the treatment of inflammatory diseases of the stomach. In such cases it gives immediate relief to the patient.

In chronic inflammation of the intestines, a rectal injection administered every day with a mixture composed of

℞ Glycozone, ℥ j;
Lukewarm water, ℥ xij;

soon relieves obstinate conditions.

A syringe made exclusively of hard rubber or glass should be used in all instances where either peroxide of hydrogen (medicinal) or glycozone is used as an enema.

After any diseased or suppurating surface has been cleansed by peroxide of hydrogen (medicinal), the application of glycozone stimulates healthy action and accelerates a cure.

Glycozone may be given for diseases of the stomach, in doses of one to two teaspoonfuls in a wineglassful of water immediately after each meal. In catarrhal diseases it should be applied in full strength as often as required.

As an application to wounds and suppurating surfaces it should be used without dilution.

Glycozone is a peculiar chemical compound, and not a mixture of peroxide of hydrogen (medicinal) with glycerin. These two liquids when mixed do not form a stable product, but develop substances which have injurious effects upon animal cells. Such a mixture, when freshly made, has no healing properties similar to glycozone. On the contrary, glycozone is stable, harmless, and always effective.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., FEB. 25, 1893.

Editorial.

PAN-AMERICAN CONGRESS NEWS.

Preparations are going gaily forward for the next session of the Pan-American Medical Congress, to be held in Washington, Sept. 5, 6, 7, and 8, 1893.

The Section on Laryngology and Rhinology is now thoroughly organized, with secretaries in all the countries of South America as well as in the United States and Canada.

The President, Dr. E. Fletcher Ingals, of Chicago, is making a thorough canvass to secure a large number of good papers for the Section, and, aided as he will be by the able Secretaries Drs. Murray and y Alonso, and the corps of honorary presidents, he feels assured of the success of this department of the Congress. The Honorary Presidents are: Dr. Harrison Allen, Philadelphia; Dr. Franke H. Bosworth, New York; Dr. J. Solis Cohen, Philadelphia; Dr. D. Bryson Delavan, New York; Dr. J. F. Dixon, Portland, Oregon; Dr. Stephen Dodge, Halifax, Nova Scotia; Dr. W. C. Glasgow, St. Louis; Dr. Frederick I. Knight, Boston; Dr. Geo. M. Lefferts, New York; Dr. Alvaro Ledan, Villa Clara, Cuba; Dr. John N. Mackenzie, Baltimore; Dr. David Matto, Lima, Peru; Dr. P. Emelio Petit, Santiago, Chili; Dr. John O. Roe, Rochester, N. Y.; Dr. Federico Semeleder, City of Mexico, Mexico; Dr. Chas. E. Sajous, Paris, France.

The Secretaries for Foreign Countries are: Dr. Ovejero [Piedad 22], Buenos Ayres, Argentine Republic; Dr. H. Guedes de Mello, Rio de Janeiro, U. S. of Brazil; Dr. G. W. Major, Montreal, Canada; Dr. Felix Campuzano [Virtudes 33], Havana, Cuba; Dr. Luis Fonnegra [Calle 10, Número 263], Bogota, Republic of Colombia; Dr. Fabricio Uribe, Guatemala City, Guatemala; Dr.

Henri Goulden McGrew, Honolulu, Hawaii; Dr. Angel Gavino [Cocheros 15], City of Mexico, Mexico; Dr. J. Midence, Leon, Nicaragua; Dr. Eugenios Cassanello [San José 119], Montevideo, Uruguay; Dr. Napoleón F. Cordero, Merida, Venezuela.

All physicians interested in this Section are requested to correspond with the Secretaries for the United States: Dr. T. Morris Murray (English-speaking), Washington, D. C.; Dr. J. Maron y Alonso (Spanish-speaking), Las Vegas, N. M.

Section of Military Medicine and Surgery.—The following gentleman have been duly appointed members of the Advisory Council of this Section: Colonel Louis Read, M.D., Surgeon General N. G., Pa.; Newton L. Bates, M.D., Medical Director U. S. N.; J. R. Tryon, M.D., Medical Inspector U. S. N.; Lieut-Colonel Eustathius Chancellor, M.D., Medical Director N. G., Mo.; Brevet Lieut.-Colonel A. A. Woodhull; M. D., Surgeon U. S. A.; Major Jos. H. Corson, M. D., Surgeon U. S. A.; Major Geo. Henderson, M.D., Medical Director N. G., D. C.; C. N. Hoagland, M.D., ex-Surgeon Ohio Vols.; Bedford Brown, M.D., ex-Surgeon C. S. A.; H. C. Goodman, M.D., ex-Surgeon U. S. Vols.; Melancthon Storrs, M.D., ex-Surgeon Conn. Vols.; O. D. Ball, M.D., Pension ex-Surgeon, Albany, N. Y.; Captain H. O. Perley, M.D., Assistant Surgeon U. S. A.

President of Section: Geo. M. Sternberg, Deputy Surgeon-General U. S. A.

Section on Diseases of the Mind and Nervous System.—Honorary Presidents: Dr. Jorge Diaz Albertina, Havana, Cuba; Dr. Juan C. Castillo, Lima, Peru; Dr. C. G. Comegys, Cincinnati; Dr. F. X. Dercum, Boston; Dr. J. T. Eskridge, Denver, Col.; Dr. Orpheus Everts, College Hill, Ohio; Dr. Juan N. Covantes, City of Mexico, Mexico; Dr. Allen McLane Hamilton, New York; Dr. William A. Hammond, Washington; Dr. P. O. Hooper, Little Rock, Ark.; Dr. Henry M. Hurd, Baltimore; Dr. J. G. Kiernan, Chicago; Dr. J. A. McBride, Wauwatosa, Wis.; Dr. Chas. K. Mills, Philadelphia; Dr. Moncorvo, Rio de Janeiro, U. S. Brazil; Dr. Putnam, Boston; Dr. E. C. Seguin, New York; Dr. E. C. Spitzka, New York; Dr. G. Isaac Ugarte, Santiago, Chile; Dr. Samuel Webber, Boston; Dr. Joseph Workman, Toronto, Canada.

Executive President: Dr. C. H. Hughes, 500 N. Jefferson avenue, St. Louis, Mo.

Secretaries: Dr. A. B. Richardson (English-speaking), Columbus, Ohio; Dr. M. G. Echeverria (Spanish-speaking), Key West, Fla. Dr. Meléndezy Cabreá (Hospicio San Buenaventura), Buenos Ayres, Argentine Republic; Dr. Nicolas Hortiz, La Paz, Bolivia; Dr. Cárlos Eires, Rio de Janeiro, U. S. of Brazil; Dr. Stephen Lett, Guelph, Canada; Dr. Plaido, Kingston, Jamaica, W. I.; Dr. Pablo García Medina (carrera 8, núm. 277), Bogota, Republic of Colombia; Dr. Emiliano Nuñez (Galiano 19), Havana, Cuba; Dr. Jose Azurdia, Guatemala City, Guatemala; Dr. George Herbert, Wailuku Maui, Hawaii; Dr. Secundino E. Sosa (Hospital de Mujeres Dementes), City of Mexico, Mexico; Dr. Pellais, Leon, Nicaragua; Dr. Francisco Soca (Florida 90), Móntevideo, Uruguay; Dr. Hemiterio Formez, Merida, Venezuela.

Section on Physiology, Announcement.—Honorary Presidents: Dr. José M. Bandera, City of Mexico, Mexico; Dr. James Blake, San Francisco; Dr. R. H. Chittenden, New Haven; Dr. Austin Flint, New York; Dr. C. Heinemann, Vera Cruz, Mexico; Dr. Joseph Jones, New Orleans; Dr. J. B. De Lacerda, Rio de Janeiro; Dr. H. N. Martin, Baltimore; Dr. Wesley Mills, Montreal, Canada; Dr. S. Weir Mitchell, Philadelphia; Dr. E. T. Reichert, Philadelphia; Dr. Antonio Pérez Roca, Lima, Peru; Dr. Magín Sagarra, Santiago de Cuba, Cuba; Dr. Cárlos Schönlein, Santiago, Chile.

Executive President: Dr. Isaac Ott, Easton, Pa.

Secretaries: Dr. A. P. Brubaker (English-speaking), Jefferson Medical College, Philadelphia, Pa.; Dr. Wm. A. Thom (Spanish-speaking), 128 Main street, Norfolk, Va. Dr. Señorans [Defensa 293] Buenos Ayres, Argentine Republic; Dr. Enrique Hertzog, La Paz, Bolivia; Dr. J. Paulo de Carvalho, Rio de Janeiro, U. S. of Brazil; Dr. A. B. MacAllum, Toronto, Canada; Dr. Julio San Martin [Dragones 94], Havana, Cuba; Dr. Antonio Várgas Vega [Calle 10, Núm. 305], Bogota, Republic of Colombia; Dr. Cárlos Durán, San Jose, Costa Rica; Dr. Cárlos Padilla, Guatemala City, Guatemala; Dr. F. L. Miner, Honolulu, Hawaii; Dr. Esteban Ferran, Tegucigalpa, Honduras; Dr. Manuel

Toussaint [San José de Gracia 12], City of Mexico, Mexico; Dr. Guerra, Rivas, Nicaragua; Dr. Juan Morelli (hijo) [Arapey 192], Montevideo, Uruguay; Dr. Ramón Porra Picón, Merida, Venezuela

Advisory Council: Dr. W. H. Howell, Boston, Mass.; Dr. C. F. Hodge, Worcester, Mass.; Dr. W. G. Thomson, New York, N. Y.; Dr. F. S. Lee, New York, N. Y.; Dr. G. T. Kemp, Brooklyn, N. Y.; Dr. John Marshall, Philadelphia, Pa.; Dr. W. S. Carter, Philadelphia, Pa.; Dr. J. W. Warren, Bryn Mawr, Pa.; Dr. R. M. Smith, Philadelphia, Pa.; Dr. F. T. Mall, Chicago, Ill.; Dr. Jacques Loeb, Chicago, Ill.; Dr. J. J. Abel, Ann Arbor, Mich.; Dr. Henry Sewall, Denver, Col.

The Government of Venezuela and the Pan-American Medical Congress.—Señor P. Ezequiel Rojas, the Venezuelan Minister of Foreign Affairs, has forwarded on behalf of his Government, through the U. S. *Chargé d' Affaires* at Caracas, a formal acceptance of the invitation issued pursuant to the joint resolution of the United States Congress to the various Governments of the Western Hemisphere, to send official delegates to the Pan-American Medical Congress. The selection of delegates has not yet been made, but the names will be forwarded at the earliest possible moment.

EXTRACTS FROM REGULATIONS AND BY-LAWS.

Members of the Congress shall consist of such members of the medical profession of the Western Hemisphere, including the West Indies and Hawaii, as shall comply with the special regulations regarding registration, or who shall render service to the Congress in the capacity of foreign officers. [General Regulation 2.]

The following shall be considered as the constituent countries of the Pan-American Medical Congress: Argentine Republic, Bolivia, Brazil, British North America, British West Indies (including B. Honduras), Chile, Dominican Republic, Honduras (Sp.), Mexico, Nicaragua, Paraguay, Peru, Salvador, Republic of Colombia, Republic of Costa Rica, Ecuador, Guatemala, Haiti, Kingdom of Hawaii, Spanish West Indies, United States, Uruguay, Venezuela, Danish, Dutch, and French West Indies. [General Regulation 7.]

The Sections of the Congress shall be as follows: (1) General Medicine, (2) General Surgery, (3) Military Medicine and Surgery, (4) Obstetrics, (5) Gynæcology and Abdominal Surgery, (6) Therapeutics, (7) Anatomy, (8) Physiology, (9) Diseases of Children, (10) Pathology, (11) Ophthalmology, (12) Laryngology and Rhinology, (13) Otology, (14) Dermatology and Syphilography, (15) General Hygiene and Demography, (16) Marine Hygiene and Quarantine, (17) Orthopædic Surgery, (18) Diseases of the Mind and Nervous System, (19) Oral and Dental Surgery, (20) Medical Pedagogics, (21) Medical Jurisprudence, (22) Railway Surgery. [General Regulation 8.]

The languages of the Congress shall be Spanish, French, Portuguese, and English. [General Regulation 9.]

The registration fee shall be $10.00 for each member residing in the United States, but no fee shall be charged to foreign members. Each registered member shall receive a card of membership and be furnished a set of the transactions. [Special Regulation 2.]

Contributors are required to forward abstracts of their papers, not to exceed six hundred words each, to be in the hands of the Secretary-General not later than the 10th of July, 1893. These abstracts shall be translated into English, French, Spanish, and Portuguese, and shall be published in advance of the meeting, for the convenience of the Congress; and no paper shall be placed upon the program which has not been thus presented by abstract. Abstracts will be translated by the Literary Bureau of the Congress at the request of contributors, and should be forwarded through the secretaries of Sections. Papers to be presented to Sections must not consume more than twenty minutes each in reading, and when of greater length must be read by abstract not exceeding twenty minutes in length. Papers read by abstract may be printed in full in the Transactions, subject to approval by the Editorial Committee. Papers and discussions will be printed in the language in which they may be presented. All papers read in the Sections shall be surrendered to

the secretaries of the Sections; all addresses read in the general session shall be surrendered to the Secretary-General as soon as read; and all discussions shall be at once reduced to writing by the participants. [Special Regulation 3.]

The Secretary-General may at his discretion organize a literary bureau, which shall consist of such number of linguists as he may determine, whose duty it shall be to do all necessary translating for the Congress, compensation for which service shall be determined by the Executive Committee. Certain members of the Literary Bureau may be designated by the Secretary-General as an editorial committee. It shall be the duty of the Editorial Committee to determine the eligibility of all contributions before the same shall be published in the Transactions, and to supervise the publication of both the Book of Abstracts and the Transactions. All work done by the Editorial Committee and by the Literary Bureau shall be subject to approval by the Secretary-General. [By-law V.]

THE UTILITY IN THERAPEUTICS OF THE INJECTION OF ORGANIC LIQUIDS.

In the MEDICAL AGE, March 25, 1892, were reported the results of the experiments of Constantin Paul with injections of sheep's brain in neurasthenia. His conclusions were:

"The injection of nervous substance promotes the utilization of foods and their assimilation. The nervous system becomes a condenser which can be charged, and the patient acquires a quantum of forces which he can dispose of at his will. But the nervous force is the first to develop, and this leads to the development of the other forces and the ability to do work of the muscles and brain."

The Boston Medical and Surgical Journal, Jan. 12, 1893, gives a later *résumé* of what has already been achieved by the injection of organic fluids:

In a recent article "On the Progress of Therapeutics in 1892" (Annuaire de Thérapeutique, 1892) the introduction of the injections of organic fluids as being an advance step in the treatment of certain nervous diseases, and in particular of locomotor ataxia and neurasthenia, is discussed by Dujardin-Beaumetz.

Since the date of Brown-Sequard's first communication (June, 1889), there has been great progress, both in the preparation of these organic liquids and in their therapeutic applications.

To-day, thanks to Arsonval's sterilizing methods and painstaking technique, organic liquids which are absolutely aseptic can be obtained, and are furnished by a sufficient number of reliable pharmacists. If syringe and needle are sterilized and suitable care be taken, these injections cause no local irritation, or at least no harm.

Dujardin-Beaumetz has the past year made in Cochin Hospital a great many of these injections, using either Arsonval's organic liquids or such as were made in the Cochin laboratory. In not a single instance was the injection attended by any local inflammatory accident. The greatest danger results from an alteration of the liquids; hence it will not do to use solutions that are at all turbid. The injection material is now put up in vials hermetically sealed, there being just enough in each vial for one injection.

For the testicular liquid vaunted by Brown-Sequard, there have been of late substituted macerations of the brain and cord, introduced by Constantin Paul under the name of "nervous transfusion liquid;" then extracts of the thyroid gland, the pancreas, and the kidney. As to the effects of these injections, good observers declare that there is no difference between the action of the testicular extract and that of the spinal marrow, prepared as Constantin Paul advises. This action is summed up in one sentence: "The tonicity of the entire economy is improved." This, says Beaumetz, is undeniable, and is remarked alike by patients with or without organic lesion.

In patients afflicted with cerebral or spinal sclerosis who have been treated by injections of gray nerve-matter, there is prompt disappearance of their pains, and especially of the *douleurs fulgurantes*. In multiple sclerosis the tremblings are alleviated. Dujardin-Beaumetz would not be willing to affirm that a positive *cure* has in any single instance been obtained, although Brown-Sequard at a late meeting of the Society of Biology de-

clared that complete cure in locomotor ataxia was the rule where the testicular injections had been used. Beaumetz is disposed to doubt whether the cases to which Brown-Sequard refers as cured were really cases of sclerosis of the brain or cord. It is well known that hysteria furnishes instances of pseudo-ataxia and pseudo-sclerosis.

It may be, with still greater reason, maintained that the pretended cures of cancer by the injections of organic liquid are cases of mistaken diagnosis; what can, however, be affirmed, is that in certain cases of marasmus at advanced periods of cachectic diseases, cancer, cholera, etc., tonic effects amounting to a remarkable amelioration have been obtained.

In neurasthenia and nervous prostration from overwork, and in hysteria, injections of these animal extracts have given especially gratifying results.

Physiologists and physicians are naturally puzzled as to the *modus operandi* of these injections; in fact, the exact composition of the organic liquid is unknown, and it is not possible to conjecture what element, if any, produces the favorable therapeutic results.

Hence, attempts have been made to get rid of the difficulty by employing some one isolated principle obtained from the animal extracts. Much has been written upon Poehl's *spermine*, designated as the true remedial agent of the testicular liquid, and which Rostchinin in the London Medical Record declares to be "true spermine," having used it to advantage in nervous affections, diabetes, pulmonary tuberculosis, and collapse, and for which he predicts a brilliant future. Another attempt in the same direction has been made at Brussels by Crocq, who makes use of the neutral phosphate of soda in 2-per-cent. solution in cherry-laurel water; he injects from 1 to 2 cubic centimeters of this solution, and claims very powerful tonic effects. He affirms that these injections have the same effects as the testicular liquid or Constantin Paul's maceration of gray nervous-matter, being curative in purely functional, and truly palliative in organic, affections of the nervous system.

Dujardin-Beaumetz remarks how difficult it is to decide as to the value of these organic liquids. There has not yet been a sufficient number of clinical trials to warrant a deliberate and definite judgment. But if any *a priori* reasoning is admissible in considerations of this kind, it must be admitted that the principle on which this medication is founded is very strange. To inject in a diabetic patient an organic liquid from the pancreas, or in a patient affected with urinary insufficiency a glycerite extract from the kidney of an animal, cannot rejuvenate in the one case the atrophied pancreas, nor in the other the altered and cirrhosed kidney; it must be that in cases of supposed recovery from organic degeneration, something in the nature of hypnotic suggestion accompanied the action of the hypodermic syringe. The notion that any one may by such injections restore or make compensation for an organ diseased or destroyed, is absurd.

But the appeal must be made to clinical facts, and the new methods must be tested under much more rigorous conditions, with carefully selected typical cases, before we can definitely judge of their merits.

THE PREVENTION OF DIPHTHERIA.

The series of three articles upon "The Spread of Diphtheria," published in the British Medical Journal, contains a most clear and succinct account of the practical outcome of recent advances made in our knowledge of the ætiology of this malady. The admitted inefficiency of present preventive measures, and the demonstration of hitherto unrecognized sources of danger, compel a revision of professional ideas on the subject. Better control of milk supplies is essential, since infection may come from the cow itself and not merely from human diphtheria. At present, owing partly to imperfect legislation, partly to laxity of administration, this branch of sanitary work is among the most neglected of all. All consumers of this article should therefore see that it is boiled before being used.

Another point is that of school infection—the most potent and universal agency in the spread of diphtheria. To remedy this, medical inspection of schools is essential, and it is necessary for health officers to exercise a close supervision over the scholars, especially during the fortnight after reassembling.

Book Notices.

DISEASES OF THE EYE, EAR, THROAT, AND NOSE: A Manual for Students and Practitioners. By Frank E. Miller, M.D., Attending Physician St. Joseph's Hospital, Throat Surgeon Vanderbilt Clinic, New York; James P. McEvoy, M.D., Throat Surgeon Bellevue Hospital Out-patient Department, New York; and John E. Weeks, M.D., Surgeon New York Eye and Ear Infirmary, Lecturer on Ophthalmology and Otology Bellevue Hospital Medical College, New York. Series edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, New York, and Visiting Surgeon Bellevue Hospital, New York. Published by Lea Brothers & Co., Philadelphia.

To facilitate the acquisition of a well assorted knowledge of diseases of the eye, ear, throat, and nose, the author has endeavored to condense into this volume in the most complete and concise manner possible the essentials of these specialties.

To the student such brief volumes have a double usefulness, not only presenting the facts, but saving his attention to lectures from interruption by note-taking. It is also hoped that the volume will serve to refresh the memory of the busy practitioner, as it is in reality a trustworthy digest of the best and latest works on these specialties. The basis of the division on Diseases of the Eye is a course of lectures delivered by Dr. Weeks at the Bellevue Hospital Medical College of New York.

This book considers a wide field of special diseases.

Of eye diseases it presents: Diseases of the lids, of the lachrymal organs, of the conjunctiva, of the cornea, of the sclerotic, of the iris, ciliary body, and choroid, of the retina, of the optic nerve, of the visual field; color-blindness; hemianopsia and its varieties; sympathetic ophthalmia; glaucoma; diseases of the lens; diseases of the vitreous humor; optical principles; the eye as an optical instrument; the ophthalmoscope; the muscular apparatus; diseases of the orbit; remedies and formulæ.

Concerning the ear, it discusses: Anatomy of the ear; examination of the patient; diseases and affections of the auricle, of the external auditory canal, of the internal ear or labyrinth, and of the middle ear or tympanum.

Of throat diseases, those of the pharynx, the larynx, and the nose are carefully exhibited, as indicated in the following paragraphs, the authors taking up *seriatim* first the anatomy and then the diseases and remedial measures:

1. Anatomy of the pharynx, palate, and tonsils; inflammation, syphilis, tuberculosis, neuroses, and tumors of the pharynx; diseases of the tonsil; diseases of the uvula; adenoid vegetations (hypertrophy of the pharyngeal tonsil).

2. The larynx: Anatomy of the larynx; laryngoscopy; inflammation of the larynx; tubercular laryngitis; syphilitic laryngitis; benign tumors, malignant growths, and foreign bodies in the larynx.

3. The nose: Anatomy of the nose; rhinoscopy; inflammations of the nose; nasal manifestations of certain constitutional diseases; syphilis of the nose; tuberculosis of the nose; scrofula; lupus; benign tumors of the nose, polypi; malignant tumors of the nose; foreign bodies in the nose; epistaxis; deviations of the septum; nasal exostoses; hæmatoma of the septum; anosmia and parosmia.

NEW DEPARTURES OF TOWN TOPICS.

Town Topics makes the following announcement:

With the first issue in March, Town Topics will be permanently enlarged to thirty-two pages. Although it is generally conceded that already this journal has become the most complete, varied, and entertaining to men and women of culture, of any weekly ever published, yet the publisher, grateful for the extraordinary favor with which the higher class of readers, not alone in America but wherever English is read, have received Town Topics, will be content only with renewed and greater efforts to produce a journal unapproached in breadth of scope and excellence of literature. Arrangements are now completed with twenty-five of the most distinguished writers of fiction to contribute short stories and serials to its columns. Among them are such world-famed authors as Amélie Rives, Mary J. Hawker ("Lanoe Falconer"), F. Marion Crawford, Jerome K. Jerome, Edgar Fawcett, Julian Hawthorne, Ambrose Bierce, Hamlin Garland, Paul

Lindau, Catulle Mendès, François Coppée, Anatole France, etc., etc.

Hereafter each number of Town Topics will contain a short story, and a chapter or two of a serial by one or the other of these entertaining *litterateurs*. There will be no curtailment of the varied and interesting matter that has heretofore gained for the journal the unique and exalted position it now holds in current literature.

Town Topics is enlarged to thirty-two pages, so that this improvement—the introduction of the highest class of stories—can be made without curtailing the many other features of the journal, which have made it the greatest weekly for the entertainment of men and women—people of culture—ever published.

Tales from Town Topics, the now world-famed Quarterly, will hereafter contain in each number, in addition to the many excellent things culled from past years' issues of Town Topics, a complete original novel. To secure the best, a prize of $1,000 is offered.

No one who enjoys the highest class of fiction, and would be *au courant* with all that pertains to good society, can afford to be without Town Topics every week. There is so much interesting reading in it and in the "Tales," that a club subscription to both will supply any family with abundant reading of the most entertaining character all the year.

To get beginning of these great stories, subscribe at once through any book- or news-dealer, or remit by cheque, money order, or registered letter to Town Topics, 21 West Twenty-third street, New York.

Contents of the Atlantic Monthly for March, 1893.

Old Kaskaskia. Part Third. By Mary Hartwell Catherwood.
Admiral the Earl of St. Vincent. By A. T. Mahan.
Mom Cely's Wonderful Luck. By Elizabeth W. Bellamy.
Persian Poetry. By Sir Edward Strachey.
Of a Dancing-Girl. By Lafcadio Hearn.
Garden Ghosts. By James B. Kenyon.
Random Reminiscences of Emerson. By William Henry Furness.
On Growing Old. By H. C. Merwin.
My College Days. By Edward E. Hale.
Words. By Agnes Repplier.
An English Family in the Seventeenth Century. By John Foster Kirk.
A Seventeenth-Century Song. By Louise Imogen Guiney.
The Ancestry of Genius. By Havelock Ellis.
A Great Lady of the French Restoration.
Pagan and Christian Rome.
Symonds's Life of Michelangelo.
Paul Heyse.
Comment on New Books.
The Contributors' Club.

Bernd's Physician's Register.

Physicians are generally admitted to be poor financiers. There is probably no class of men who realize so little financially from their labors. Persons are often astonished to see in what straitened circumstances many physicians, who were known during life to have had large practices, on dying leave their families. One reason of this is their laxity in looking after their accounts. It has been found difficult for one engaged in the active practice of medicine to keep what is called a day-book, a cash-book, and a ledger; for with such a set of books, oftentimes not having time to enter any charges for two or three days, he will frequently forget many items. Then, again, frequently he will let his ledger go unposted for weeks and months, and when called upon to make out a bill he will in consequence not be able, and will be under the necessity of asking the applicant to call again.

One of the best books that we know of for a physician, in which he can keep an account of his services, is Bernd's Physician's Register. For a physician to keep one of these requires no special skill or knowledge of book-keeping. Its use may lead the doctor, however, to readily keep track of his accounts and favorably modify his scant income. It is the business end of his profession that the physician too often forgets.

The Indian Summer Time. Song and Chorus by Will L. Thompson. Published by W. L. Thompson & Co., East Liverpool, Ohio. Price, 20 cts.

This song, which is now being sung on the stage, is a popular one. It is musical and reminiscent of the brightness of the Indian Summer time. The music brings to one memories of chimes and of the Angelus.

Notes and News.

The French Society of Electropathy.—

The French Society of Electropathy is about to manage a yearly Exhibition, which will take place the Friday and Saturday of Easter week in 1893. It will be held in the "Laboratoire de physique de la Faculté de Médecine" in Paris, and will include the instruments employed in electropathy, as well as demonstrations concerning electric methods, drawings, etc.

The Organizing Committee is represented by Prof. Gariel, Drs. Tripier, Gautier, Vogt, and M. Gaiffe, constructer. Dr. Vogt, 28 Rue Saint-Lazare, Paris, will furnish information on application.

Burdette on the Lot of Man.—

Man, born of woman, is of few days and no teeth. And indeed it would be money in his pocket sometimes if he had less of either. As for his days, he wasteth one-third of them. And as for his teeth, he has convulsions when he cuts them. And as the last one comes through, lo! the dentist is twirling the first one out; and the last end of that man's jaw is worse than the first, being full of porcelain and a roof-plate built to hold blackberry seeds.—Burdette in *Medical and Surgical Reporter*.

New Journals for 1893.—

With the first of the year, as usual, several new medical periodicals have made their appearance: The Rhode Island Medical Science Monthly; American Climates and Resorts; The Indian Medico-Chirurgical Review, a review of Indian and foreign medicine, published in Tardeo, Bombay; The Medical Week, an edition in English of the well known French journal La Semaine Médicale; La Clinique Internationale; the first monthly issue of Archivo Italiano di Otologia, Rinologia e Laringologia.

Meeting-Place Changed.

The Northern Ohio District Medical Society will hold its next meeting at the Sloane House, Sandusky, instead of the Soldiers' Home as had been intended.

Therapeutic Brevities.

The Remedial Use of Apples.—Chemically the apple is composed of vegetable fibre, albumin, sugar, gum chlorophyl, malic acid, gallic acid, lime, and much water. Furthermore the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter, lecithin, of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood, that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves growing feeble and infirm, resorted to this fruit to renew their powers of mind and body. Also, the acids of the apple are of singular use for men of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters, which if retained would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles. Some such experience must have led to our custom of taking apple-sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such rich fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach, rather than provoke it. Their vegetable sauces and juices are converted into alkaline carbonates, which tend to counteract acidity.—*North American Practitioner* (*Medical Record*, Jan. 21, 1893).

Castration for Melancholia.—The operation of castrating males for nervous and mental disorders is at last put upon a firm clinical basis. Oöphorectomy came from the South, and thence diffused its genial and unsexualizing influence over the East and North; but testectomy, if we may coin a word on so great an occasion, comes from the West. It was in 1891 that the Eastern Michigan Asylum published an annual report containing the history of a case in which the operation of castration was done for the relief of a "sickening neuralgia" of the testicles. The patient had not only neuralgia, but melancholia. One of the testicles was removed, and the testicle was found diseased, but not, as we understand the description, cystic or suppurating. The patient improved, but was not cured, and so, later, the second testicle was removed. The medical superintendent,

Dr. Burr, now reports that the cure is complete. It is interesting to notice that both testicles had to be removed, just as, in the opposite sex, we are told that both ovaries ought to go in order to get the best results.

Here we have a case of chronic neuralgia and melancholia, in a man of 57, cured by castration. Neuralgia is very common, and so is depression of spirits. There is a fruitful field, therefore, in which ambitious andrologists may work. Shall we not soon begin to get reports of "my second series of one thousand castrations, with hints on technique?"—*Medical Record.*

The Treatment of Functional Dysmenorrhœa.—James Oliver (Edinburgh Medical Journal, July, 1892) recommends that the food be plain, and that gentle exercise be taken and an attempt made to establish the custom of having a morning evacuation of the bowels. In cases where there are pain and nausea, no matter whether the disturbance is central or in the organs themselves, the writer finds good results from a large dose of bromide given at bedtime, for a week midway between the periods, and 5 grains of antipyrin every hour beginning as soon as there is any indication of the approach of menstruation, and continued, if necessary, until about half a dozen doses are taken. When the discharge is scanty, and especially when the pain seems to be due to vascular spasm, the patient should take a hot bath each night for a week preceding the period, and afterwards a mixture of the three bromides, the dose varying from 10 to 20 grains of each. If the pains appear to be dependent upon gastro-intestinal disturbance, a mixture containing either chloride or hypophosphite of calcium should be administered during the intermenstrual epoch.

Creasote in Whooping-Cough.—Dr. Lerefait of Rouen has employed creasote in whooping-cough, and reports very good results (Wien. Med. Presse). In every case where the disease had not already been complicated with a serious pulmonary affection—such as capillary bronchitis or pneumonia—when the treatment was begun, there was observed a gradual diminution in the frequency and intensity of the attacks, which in the end completely disappeared in from five days to six weeks, according to the severity of the case.

It was also found that the creasote cures the vomiting much faster than any other remedy. Even in the severer cases, where each attack was followed by vomiting, this symptom was arrested in twenty-four hours—a result in itself valuable, because it renders the ingestion of food possible, which enables the patient to more effectually combat the disease.

The creasote was prescribed in ½-per-cent. solution, the smallest dose given of this being 3 teaspoonfuls a day (in a child 44 days old).—*Merck's Bulletin*

The Treatment of Cholera by Chloroform.—Dr. Desprez, after an experience of twenty-five years, recommends a compound mixture of chloroform in this disease. He finds (1) that his mixture calms the gastric spasm which prevents the ingestion of medicine and food; (2) that it actively stimulates the functions of the skin, which are so closely allied to those of the alimentary canal and kidneys; (3) that he can introduce into the economy, when absorption is possible, substances capable of reëstablishing the normal composition of the blood, and the remedies destined to render it more fluid, and which fit it to enter the capillary circulation and make it susceptible to hæmatosis. His formula is: Chloroform, 1; alcohol, 8; acetate of ammonia, 10; water, 110; syrup of the hydrochlorate of morphine, 40. Of this the dose is a tablespoonful every half-hour. He claims, by this treatment, 80 to 90 per cent. of cures, laying special emphasis upon the toxic effect of chloroform upon the micro-organisms of this disease.—*L'Union Médicale*, 1892, No. 110, p. 409 (*University Medical Magazine*).

Solanum Jacquinii in Rheumatism.—Dr. Banerjee writes to the Indian Medical Record upon the use of this drug in the treatment of articular rheumatism. The plant is a biennial trailing herb, which grows all over India as a weed. It is much used by the natives of India, and is very popular with them. It has marked diaphoretic and expectorant properties. For articular rheumatism Dr. Banerjee employed the drug as poultices made out of bruised leaves and stalks, and internally a warm decoction with ginger was given in 1- to 3-oz. doses three or four times a day. Profuse perspiration invariably resulted; acute symptoms in some cases subsided in three days, and the pain and tenderness of the joints abated within a fortnight. Some cases were cured within a month, but others were not affected at all. Some of the patients showed great exhaustion under its influence. Male patients bore it well. Dr. Banjaree urges upon medical men in India to give this drug a trial. It is

lecidedly encouraging to see signs of awak-ened interest in Indian remedies, which are both numerous and valuable.—*Chemist and Druggist.*

Pilocarpine in Croup.—In the course of a diphtheria epidemic Dr. H. Degle, of Kindberg, had occasion to treat four cases of croup, which he did by means of pilocarpine, and with the result of effecting a prompt cure in every case. The patients ranged in age from 18 months to 8 years. The pilocarpine was administered in doses of 2 to 4 centigrammes [⅓ to ⅔ grain] daily.

The effect of the medication is said to have manifested itself in from twelve to twenty-four hours, by a considerable diminution of the dyspnœa and an abundant expectoration of pseudo-membranes and of sputa.—*Merck's Bulletin.*

Bedside Urinary-Test Case.—Dr. Beane says of the Böttger test: Mix equal volumes of the urine and a solution of sodic carb. (crystals, 1 part; distilled water, 3 parts), add a few grains of bismuth subnitrate, and boil for two minutes. "The tablets offered by Messrs. Parke, Davis & Co., in their 'bedside urinary-test case,' are a very convenient form for making use of Böttger's test, and their case is for bedside testing indispensable to the careful practitioner." The article is some seven pages in length and is a most careful study of the whole subject.—*National Medical Review*, February, 1893.

Cascara Sagrada in Tapeworm.—In the Therapeutische Monatshefte, cascara sagrada is highly recommended in the treatment for tapeworm by Stephens. He uses the following prescription.

Fl. ext. cascara sag., 24 grammes.
Syrup orange peel, 100 grammes.

Dose: Three times daily a teaspoonful; for children, three times daily a half-teaspoonful.

A New Abortifacient.—At a recent coroner's inquest at Leicester, England, testimony was adduced to show that the deceased, a woman, had been in the habit of purchasing diachylon in the lump, and eating it to produce abortion. The experiment was generally successful in her case, it was alleged, but she tried it once too often, and died from an overdose of lead.—*Journal of the American Medical Association.*

Medical Progress.

THE USE OF LANOLIN AND BORACIC ACID IN CERTAIN DISEASES OF THE SKIN OF CHILDREN.—Russell Sturgis, M. D., of Boston, Mass., in a paper read before the Boston Society for Medical Improvement, and published in Boston Medical and Surgical Journal, said:

I wish, this evening, to call attention to the use of an agent with which I have been much pleased, and hope that I can induce those who have more opportunity of treating the skin than I to give it a more extended trial. I have used lanolin in the Children's Room at the Boston Dispensary during last winter and this. Those cases in which I have found it of use are facial eczema and eczema of the head, eczema squamosum, eczema rubrum and intertrigo, the mild form of seborrhœa often seen on the temples and about the chin, and lastly, chronic urticaria.

In eczema of the face and head, where there is on the face a more or less raw surface from scratching, with papules, vesicles, and pustules, and on the head a similar condition of things existing under a dry, dirty, yellow crust, I first direct that the head and face shall be cleaned of the crust in the usual way. Should the exposed surface be weeping copiously, I prescribe boracic acid in very fine powder, to be dusted on for the first forty-eight hours, night and morning, and not to be washed off.

The first effect of the acid is generally to increase considerably the serous flow, but after twenty-four hours to diminish it. After forty-eight hours I direct that the boracic acid, as much as may be left mixed with the dried serum, shall be washed off with warm water. The surface is now seen to be less inflamed, and not discharging as much as when the crusts were first washed away. I now direct that the boracic acid shall be applied night and morning, washing off each time the acid applied the time before. As soon as the skin is in condition to bear an ointment, I use one of boracic acid ʒ ij, to lanolin ʒ j, by which the acid is kept in contact with the skin better than if used in powder.

Boracic acid alone or with lanolin acts in a very satisfactory manner in alleviating the intense itching of eczema; much less restraint being necessary to prevent the child from damaging the skin by scratching. In cases where the eczematous patch is so situated that it is not rubbed by the bedclothing, as on the vertex and anterior aspect of the cheeks, I prefer to use no covering

because there is not so much danger of tearing away the crusts that may form and become adherent to such covering. When the patch is on the neck or about the ears, I use absorbent cotton kept in place by a bandage or cap. Unruptured vesicles and pustules near the margin of a patch I slit myself, reducing them to the same condition as the unprotected skin in the centre of the patch.

In eczema of the face, after most of the redness and evidence of acute inflammation have subsided, I treat the induration which is left by daily inunction, morning and night, with pure lanolin. My directions are to rub this in till the surface feels scarcely greasy. If the rubbing is as vigorous as directed, the induration soon disappears. I do not know whether the lanolin is the beneficial factor, or whether it is the massage with lanolin as the emollient.

In cases of eczema squamosum in which there is considerable induration, with scaly surface, accompanied by cracks or not, I first clean off the scales with plenty of hard rubbing with sweet oil, and washing with Castile soap. If one scrubbing is not enough to clean the patch, I keep on till it is clean. Then, night and morning, I direct brisk, hard rubbing with an ointment of 5 to 15 grains of salicylic acid to the ounce of lanolin, according to the degree of induration. This treatment will, I think, restore the skin to its normal condition in less time and with less discomfort to the child than the more painful application of oil of cade and the stronger alkalies. The advantage is that when lanolin is used I have not been compelled to use this harsher treatment. I have not been obliged to use any stronger irritant than 15 grains of salicylic acid to the ounce to get the effect that I wanted. My impression is that this is due to the fact that probably an irritant is brought into closer contact with the deeper layers of the skin by the means of lanolin than if it were applied, more to the surface, without lanolin being used. In this connection it may be mentioned that in infants and young children, with their delicate skins, induration and scaling probably yield to much milder remedies than the tough, old cases in adults, in which strong irritants are called for.

In cases similar in appearance to eczema squamosum, but which are really seborrhœa, which I have mentioned before as common on the faces of children, where there is no induration, and little or no change in color of the surface, an ointment of 5 grains of salicylic acid to the ounce of lanolin, used night and morning, is enough to remove the scales. After the disappearance of the scales I use lanolin alone once a week or oftener to keep the skin in good condition, as such scaly patches are prone to return, particularly in winter.

In chronic urticaria, I am inclined to think that we have in lanolin a reliable application to alleviate the itching, which is usually so difficult to control. I have had the opportunity of using it in three cases only. In a case which I hoped to show you here to-night the urticaria had lasted for three weeks before the child came to my room, Jan. 7th. I directed the mother to use lanolin on the right side only, leaving the back and left side alone. I gave no internal treatment, as the general health of the girl was perfect nor could I learn of any article of food that was likely to cause the trouble in her case. I saw her again on the 11th. Her mother reported that since the application of lanolin there had been no itching of the side treated, the other side had itched as much as before, particularly in the evening, and welts made their appearance, as usual. I directed the ointment used as before, on the right side only, which now was much improved in appearance. On Jan. 14th all signs of scratching had disappeared from the right side, and the left looked better and felt somewhat greasy. I taxed the mother with using the ointment on the left side; she denied it. Jan. 18th I saw the child only; she reported all the itching, back and front, to have gone and owned up to using the lanolin otherwise than as directed. I had hoped to be able to show this case with symptoms of urticaria on one side, with a well marked line of demarcation between the sound and the affected side.

In regard to the antiseptic properties of lanolin, Dr. Gottstein, in an article which appeared in the Berliner Klinische Wochenschrift, Nov. 28, 1887, and which is reviewed in the British Medical Journal of Dec. 24, 1887, states that lanolin is absolutely inimical to the growth of micro-organisms, of whatever kind they may be. In this connection it may be mentioned that Liebreich has shown that cholesterine fats, which are chemically the same as lanolin, are a normal constituent of the epidermis in man and the lower animals, thus constituting the most powerful protection against infection from without. In the employment of lanolin therefore, we are using not only a superior emollient, but also are saturating the skin with a substance upon and in which it is impossible for micro-organisms to exist.

I had occasion to use boracic acid first some three years ago, in a case of often recurring eczema behind the ears, which had

esisted most successfully other modes of reatment. The case did so nicely that I ıave since used it whenever I have had oc- asion to treat eczema rubrum and intertrigo n children. I direct that the pure, finely-)owdered boracic acid shall be dusted over he parts night and morning, and, when about he genitals, whenever the napkins are hanged. Each night and morning the acid reviously applied should be removed before nore is put on. Since employing this treat- nent I have had no occasion to use zinc and tarch powder or zinc ointment, which I used efore as routine treatment. When now heir use is indicated I use pure boracic acid, r boracic acid with lanolin.

In regard to internal treatment, I am uided wholly by the general condition of the ase, regarding the skin disease in eczema as ntirely local. In conclusion, I would say hat I have found, in general, boracic acid f value where there is much serous oozing; oracic acid and lanolin where there is ess; lanolin alone where there is moderate caling and induration, and in urticaria; alicylic acid and lanolin where there is con- iderable scaling and induration.

THE PROSPECTUS OF THE SARATOGA CARLSBAD SPRING.—The spring now known as "The Saratoga Carlsbad" is about seven years old. The drill struck it in the summer of 1885, but it did not attract wide attention until about a year ago. At that time several well known physicians began to remark upon its merits; and the more they investigated it and experimented with it, the more convinced they were that it had unique therapeutic value.

Since then its standing has become so well recognized that the company owning it have been induced to bring out a pamphlet that would distinctly set its merits before the public.

The production of this pamphlet naturally leads to the question, "How did this spring get the name of 'Saratoga Carlsbad?'"

The public, appreciating, though unscientifically, certain properties of the water, gave it the name of "Saratoga Carlsbad;" and though it is free from Glauber's salt (*sodii sulphas*, sulphate of sodium), it is credited with much of the best therapeutic effect of the foreign Carlsbad water.

Glauber's salt is the most pronounced ingredient of the foreign Carlsbad, and is used in combination with bicarbonate of soda to make the imitation of the salts that are produced by the evaporation of the genuine Carlsbad water. Glauber's salt is now most used in veterinary medicine; it is overradical for the human stomach, though some plethoric and overfed foreigners take courses of the water at the Carlsbad Springs, but never for more than from twenty to twenty-five days at a time.

The gentler laxative action of the Saratoga Carlsbad was believed to produce the beneficial effect of the foreign Carlsbad without drastic purging.

The prospectus also describes the Saratoga Carlsbad as a natural saline-alkaline lithia water, and this appears to be making a large claim, but its justice can be shown, and the Saratoga Carlsbad will occupy a peculiar place among mineral waters—one that will not be frequently assailed.

That it is a saline water, analysis by Professor Chandler shows, there being a total of 712.72 grains of chlorides to the United States gallon. Chloride of sodium, common salt, is most largely represented, and helps to give the water its laxative effect.

Dr. J. A. Irwin, of New York, author of "Hydrotherapy" at Saratoga, says of the Saratoga Carlsbad: "In the conditions in which a strongly *saline gaseous water* is indicated, there is no better in the whole world."

As for its alkalinity, Dr. Thos. H. Burchard, of New York, says: "This spring furnishes us with another *alkaline cathartic water*, particularly rich in the soda, magnesia, and lithia salts."

Dr. Burchard has also said ("The Alkaline and Antacid Waters"): "Strictly speaking, there are but two characteristically alkaline springs in Saratoga. One the Vichy, and the other the Saratoga Carlsbad."—p. 16. "Both chemically and therapeutically, I regard it as a more efficient water than any of the so-called 'lithia waters' now on the market."—pp. 45–46.

The analysis shows the richness of the Saratoga Carlsbad in lithia, far in excess of the springs that aim to be known as "lithia" springs. For example, the Saratoga Carlsbad is credited with 6.691 grains of lithium to the gallon; while the Buffalo Lithia Springs, which have claimed to be the strongest of the *natural* lithia waters, are rated as follows: Spring No. 1, 1.484 grains; Spring No. 2, 2.250 grains; and Spring No. 3 only shows *traces* of lithia.

In a word, the Saratoga Carlsbad water appears to be capable of relieving or removing a multitude of human ills. It is described as a gentle laxative, with no depressing after-effects; as a stimulant to digestion; and as a valuable assistant to assimilation.

Rheumatism, gout, Bright's disease, and catarrhal affections are in the list of the dis-

orders which it will affect most radically. It has a wide field. It is already favored by physicians, and the public receive it with approval, not alone because of its beneficial effects, but because of its agreeable gaseous quality, and because it has no nauseous taste. —*The Doctor*, Nov. 20, 1892.

Eucalypteol, a Succedaneum for Eucalyptus Oil and Eucalyptol.—It is generally known that all the eucalyptus preparations—eucalyptol, eucalyptus oil, the powdered leaves, etc.—exert an essentially irritant action on the digestive tract, and in large doses (3–4 grammes [45–60 min.] of the oil of eucalyptus) provoke congestive headache, general malaise, phenomena of intoxication, and mental prostration. Now M. Anthoine (Bull. Gén. de Thér.) has obtained from oil of eucalyptus, by treatment with hydrochloric acid, a crystalline, well defined body of uniform composition, which he calls "Eucalypteol," and which is chemically dihydrochlorate of eucalyptene. This occurs in the form of perfectly white micaceous scales, of an aromatic, camphor-like odor, and a peculiar, rather feeble, but persistent taste. It is almost insoluble in water, but very soluble in alcohol, ether, chloroform, fatty and volatile oils, or petroleum; its melting-point is at 50° C. (122 F.).

According to physiological experiments made by Dr. Lafage, of Neuilly, eucalypteol is devoid of toxic action, and is well borne by the stomach; it is eliminated largely by the bronchial and salivary secretions, in which it reveals itself by a peculiar faint but still appreciable aroma. The same odor is also perceptible, but more feebly, in the urine; while in the intestinal fluids it is much more distinct. Clinically, the preparation was found, as was to be expected, to exert a favorable influence on the bronchial mucous membrane and on the cough in bronchitis, acute or chronic, and in certain other pulmonary affections, and to be an excellent gastro-intestinal disinfectant in such affections as typhoid fever, choleriform diarrhœa, green diarrhœa, etc. As regards the dosage of eucalypteol, in adults usually 1.5 grammes (23 grains) were given daily, in divided doses, between meals. In children, for those under one year the daily dose was 25 centigrammes (3¾ grains), for those of four or five years 30 to 50 centigrammes (4½ to 7½ grains), and for those over that age 50 to 75 centigrammes (7½ to 11¼ grains). Owing to its slight solubility in water or glycerin, and to the facility with which it is decomposed by alcohol, eucalypteol is to be administered to adults only in wafers or capsules. In children, it is best given as a confection, to be taken with milk or water.—*Merck's Bulletin*, January, 1893.

Camphor Subcutaneously in Pulmonary Embolism.—Little or nothing being as yet known of the treatment of pulmonary embolism, the following case, observed by Dr. Oeder at the Augusta Hospital (Berlin), and successfully treated by means of hypodermatic injections of camphorated oil, is certainly deserving of attention.

The patient was a woman of 44 years, affected with advanced mitral insufficiency and stenosis, and presenting at the same time a uterine myoma as large as a man's head. When first seen, she was almost unconscious, cyanosed, algid, and covered with cold perspiration, and there was severe dyspnœa. The pulse was regular, small, and frequent (about 120 a minute); loud râles were heard over the trachea and over the entire extent of both lungs, completely drowning the respiratory murmur and the heart-sounds. Percussion also gave no definite results, but, in view of the auscultatory signs and the subjective symptoms, and in consideration of the existing heart-trouble and the myoma, which afforded ample opportunity for the appearance of venous or cardiac thrombi, the diagnosis of embolism of a large branch of the pulmonary artery was arrived at.

Hypodermatic injections of camphorated oil, each representing (according to the Berl. Klin. Woch.) 0.2 gramme [3 grains] of camphor, were immediately resorted to, and repeated every five minutes. After the third injection a manifest improvement was observed; the pulse was stronger, consciousness returned, and the patient complained of an intolerable sensation of suffocation. This was calmed by an injection of 0.01 gramme [⅙ grain] of morphine, and the camphor injections were continued. At the end of an hour the improvement was considerable; the symptoms of pulmonary œdema had disappeared, and the respiration (which previously could not be counted) had diminished to 36 per minute. The next day the patient expectorated an abundance of bloody sputa, and the physical examination of the chest revealed, on the right side and posteriorly, two foci of pulmonary infarction, as well as increased cardiac dullness extending 4 centimeters [1⅝ inches] beyond the middle of the sternum. After a few days all the symptoms of infarction disappeared.

Dr. Oeder thinks that if the embolism had persisted, the case would certainly have ended

fatally; fortunately, in consequence of the energy of the cardiac contractions produced by the camphor injections, the embolus was detached and reduced to fragments, which then provoked the formation of the foci of infarction.

It should be noted that, in the above case, as much as 2.4 grammes [36 grains] of camphor was injected subcutaneously within one hour.—*Merck's Bulletin.*

THE RADICAL CURE OF HERNIA, WITH A DESCRIPTION OF A METHOD OF OPERATION FOR FEMORAL HERNIA.—Cheyne (Lancet, Nov. 5, 1892) says that practically all the methods for closure of the femoral canal consist, after tucking up the sac, in the attempt to approximate Poupart's ligament and the fascia over the pectineus. Now Poupart's ligament is a tense band, and when stitched down to the pectineal fascia, one of two things happens: (1) The tension is so great that the stitches soon cut their way out; or, (2) what usually happens if the pectineal fascia is alone taken up in one stitch, it is at once torn off the pectineus and carried towards Poupart's ligament, and the stitch soon cuts through the fascia.

On thinking over the matter, he concluded that the only satisfactory plan would be to turn in some tissue which would fill the femoral canal and at the same time not be subjected to any tension. The author states that a flap cut from the pectineus muscle itself would answer all purposes.

The plan of operation is as follows: After the hernia has been reduced, the neck of the sac is ligatured and stitched to the abdominal wall. A flap is then marked out on the pectineus muscle of sufficient size to fill up the crural canal without any tension, and including the whole thickness of the muscle. The incision in the muscle begins at the inner wall of the crural canal, runs for a short distance parallel with Poupart's ligament, and then curves downwards, outwards, and upwards. At the two lowest angles of the flap, stitches are passed and tied so as to get a good hold of the muscle. The flap is then peeled up from the bone, and the stitches are passed through the abdominal wall, above it and just at it.

The result is that the femoral canal is filled up with a thick mass of the fibrous tissue. The sutures used were of Chinese silk of medium thickness. The author has had perfect results in all his cases, the region of the crural canal remaining a hard mass, without the slightest impulse on coughing, and the patients do not wear a truss.—*University Medical Magazine*, January, 1893.

THE CHEMICAL POISONS OF DISEASE.—It was recognized from the first by some of the keenest intellects in medicine that the germ theory of disease, as once more put forth under the influence of Koch's discoveries, was inadequate to explain observed phenomena. Not a little courage was required to stand up and be called "old fogy" or "reactionary" by the unthinking, but one could not for the dread of obloquy stifle his reason and his scientific conscience. The proof of the ætiologic moment of bacteria embodied in the celebrated "four rules of Koch" was manifestly insufficient, unless the microbe was admitted to be the sole factor in infection. The first (not to prove logically, but) to clearly demonstrate, by modern experimental methods, the necessity of adding a fifth rule—namely, that the suspected microbe should be capable of generating within and without the body a poison that, when inoculated, should reproduce the morbid phenomena—was unquestionably Prof. Vaughan, of Ann Arbor; and at the Newport meeting of the American Medical Association (1889) he defended this doctrine against the skepticism of one of the leading bacteriologists of America; exhibiting, at the same time, crystals of a poison believed by him to be that of typhoid fever. America must, therefore, be credited with this further step toward the truth. Nevertheless, the whole truth is not yet apparent. The next step will be the demonstration of the morphologic and chemic factors of "susceptibility" on the one hand, and of immunity on the other. Something has been done in this line, but the results are still obscure.—*Medical News*, Dec. 17, 1892.

HYDRIODIC ACID.—In an article on "Hydriodic Acid in Special Practice," J. Hobart Egbert (American Medical Journal, October, 1892) says: "As the acid itself is not a stable preparation, it is official only as a syrup, and the syrup of hydriodic acid is rapidly becoming a leading therapeutic agent. Numerous brands of this syrup are now on the market, and after considerable investigation we have of late given our preference to the preparation made by Parke, Davis & Co., of Detroit, Mich., which we believe to be a superior syrup. Its consistency is that of a thin syrup, having a clear white color and a decidedly acidulous taste, closely resembling that of lemonade. It is highly palatable, being readily taken by children and patients with weak stomachs, and in none of the cases treated with it have there been any digestive disturbances or any complaint against taking it. The amount of iodine in this syrup is ab-

solute and invariable. It is a double-strength syrup (2 per cent.), so that in each ounce of the syrup there are 11.84 grains of absolute hydriodic acid; thus, each drachm of the syrup contains about the same amount of iodine as is contained in 10 grains of the iodide of potassium. The U. S. P. syrup is only 1 per cent., or 5.92 grains to the ounce, and is not a very stable preparation, as it soon undergoes change whereby free iodine is liberated and the preparation rendered harmful. We have employed the double-strength syrup (P., D. & Co.) extensively, and have been well pleased with the results of its use. The acid is readily absorbed, and iodine compounds can be detected in the urine ten minutes after taking. It is eliminated by all the secretions, chiefly the urine, as iodides and iodates. Unlike the iodides, syrup of hydriodic acid may be advantageously combined with the vegetable tinctures and syrups."

THERAPEUTIC EFFECTS OF TESTICLE JUICE.—Brown-Séquard (Soc. de Biol., Oct. 29th) sums up the experience so far accumulated as to the therapeutic effects of testicle juice as follows: In more than 100,000 injections the procedure has only on two occasions been followed by rise of temperature; hardly any pain has been complained of, and no symptoms of septic infection have been observed. In 120 cases of ataxy in which the method has been used, there have been only two instances of failure. In four cases of cancer, improvement has taken place, discharge being diminished, pain ceasing, bleeding being checked, œdema disappearing, and the tumor seeming to shrink. In cases of uterine fibromata the tumor has always been reduced in size. Of seven cases of paralysis agitans, two have been improved, one of them being almost cured. In all the cases of lateral sclerosis in which it has been tried, the method has given good results. In tuberculosis it has been very successful; diabetes has also been favorably influenced, and one case has been cured.

The preparation, as prepared by d'Arsonval, is now of the strength of 1 in 2.5, instead of 1 in 5 as it used to be. An equal weight of water should be added to it before use; this prevents the injections causing pain.—*British Medical Journal.*

THERAPEUTIC APPLICATION OF ANTIPYRIN.—Dr. Theo. Weed, of Cleveland, states that in a number of cases of rheumatic gout, himself being one of them, he has found antipyrin to be a useful agent in alleviating the pain. In his own case he divided 20 grains of antipyrin into three powders, and took one every eight hours, and in forty-eight hours his pain was completely relieved. He also used it in a case of sciatica, caused by sitting for some time on a wet buggy-seat. In this case he prescribed it in 4-grain doses with an equal amount of quinine. In the course of two days the neuralgia had entirely subsided. He mentions a case of bronchitis in a child of seven years, where he gave 3 grains at night. The cough was loosened, a mild perspiration broke out, and the child awoke much refreshed. He finds that he can depend on its action, both as an antipyretic and as an analgesic. He advocates antipyrin for nervous headaches.

THE THERAPEUTICAL APPLICATIONS OF COCILLANA.—John V. Shoemaker, A.M., M.D., in the Medical Bulletin, February, 1893, publishes an interesting description of typical cases in which cocillana proved to be a most available and successful remedy.

Among these may be mentioned seven cases of subacute bronchitis, two of them in children; one case of cardiac hypertrophy with subacute bronchitis; one case each of coryza and spasmodic croup, each complicated with subacute bronchitis; one case of chronic coryza with bronchitis; one case each of spasmodic croup, asthma, hay fever, pneumonia, pulmonary tuberculosis; and two cases of persistent cough after measles.

Dr. Shoemaker says in closing: These cases are selected from many in which I have employed cocillana with equal advantage. I have, in some cases of chronic bronchitis, found it fully as efficacious as iodide of potassium, and it is usually better borne and can be used for a longer period continuously than the iodide. Cocillana should, therefore, be esteemed a very welcome addition to our therapeutical resources. In the doses which I have named, it is totally free from nauseating or depressing effect. In beginning my clinical experiments I gave the remedy alone. When I became acquainted with its properties I combined it with some syrup for the purpose of increasing its palatability, assisting its action, or fulfilling other indications of the case.*

* Reprints of Dr. Shoemaker's complete article, as well as reports from other physicians who have investigated cocillana, will be mailed to physicians, on request by Parke, Davis & Co., who alone supply this product.

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Original Articles.

THE SURGICAL TREATMENT OF APPENDICITIS—TREATMENT OF RECURRENT APPENDICITIS.*

BY DR. CHARLES TALAMON.

The operations which may be performed, and which have been by turns advised, in appendicitis, are:

Simple incision.

Sonnenberg's incision (operation with two stages, and an interval between).

Lateral incision along the external border of the rectus.

Lateral incision into the right iliac fossa.

Median laparotomy.

Simple incision is the operation of the old surgeons, and is especially applicable to a temporizing mode of treatment, the patient being left till the abscess points externally. Indication for this operation is found only in cases where, for one reason or another, the disease has been left to itself till this late period.

Sonnenberg's *operation at two different times* consists of incising, in a first operation the abdominal wall only to the peritoneum, and in determining by an exploratory puncture the presence of pus; then, according to the result obtained, in a second operation the opening into the abscess is completed; or else the exploratory incision is tamponed, and bursting of the abscess sac at this point awaited and solicited. (As Sonnenberg's operation is unlikely to commend itself to surgeons, further description and discussion are omitted. It is an operation that would hardly be practicable in private practice.)

A lateral incision along the external border of the rectus has been proposed, as leading directly to the appendix. But in general the main seat of the pus is considerably outside of this line, and by such an incision one risks coming down upon the inner side of the purulent collection and hence of opening the part of the peritoneum which remains sound and protected from the consequences of the perforation. This procedure, according to Roux of Lausanne, could be useful only in cases where the appendix is deviated upwards and inwards, and where the purulent focus tends to locate itself in the vicinity of the umbilicus.

As to *median laparotomy*, the majority of surgeons are agreed upon reserving it for cases in which the peritonitis is generalized. When the peritonitis is partial, the median incision is open to the same objections as the lateral incision: the line of the cut strikes the abscess too far inwardly; and the peritoneal cavity, heretofore protected by adhesions, becomes infected, and it may be necessary to make a new lateral incision to evacuate the pus sac which is outside the line of incision.

The best method, as all authorities admit, is therefore by the *lateral incision in the iliac fossa.* Some make it along the right semilunar line; others obliquely, parallel with Poupart's ligament.

According to Treves, the semilunar incision is bad, because it does not permit direct evacuation of the pus. It is better to make an oblique incision, directed from above downward and inward, external to the deep epigastric artery, terminating a little above and outside of the middle of Poupart's ligament, following the general direction of the incision made for the ligature of the iliac vessels.

The oblique incision is also the one adopted by Roux, of Lausanne. He makes it parallel to Poupart's ligament, one-half inside and the other half outside the antero-superior spine of the ilium, from which it is separated by 1½ to 2 centimeters. It is necessary to avoid as much as possible the epigastric artery, which should be left at the internal part of the lower extremity of the

*Continued from the MEDICAL AGE of Nov. 10, 1892. (Translated by E. P. Hurd, M. D.)

incision. Grave secondary hœmorrhages have been seen in consequence of wounds of this artery (Morton).

This oblique incision allows the surgeon to reach the purulent collection by pressing inward the intestinal coils agglutinated in the iliac fossa. In order to operate with certainty, the incision should be sufficiently long—3 to 4 inches, say the American surgeons; 15 to 18 centimeters, says Roux of Lausanne. It is better not to have the incision too long, for that would favor ventral hernia later on.

The surgeon incises layer after layer down to the *transversalis fascia*. Having reached this point, he incises the peritoneum only in the upper and outer portion of the wound, where he is certain of finding the cæcum. "We then," says Roux, "engage the index finger between the intestine, which we press inwardly, and the external abdominal wall; then we continue the exploration and the separation to the back part of the abdomen, when the pus does not well out at the first touch of the knife and there are indications that the seat of the abscess is in the retro-cæcal space. If we find nothing, we complete little by little the section of the peritoneum, and continue to explore the iliac fossa, being careful how we separate the adhesions, and searching for the point of insertion of the appendix, that our labor may not be in vain. If the appendix is difficult to find, it is because it is embedded in a mass of adhesions, whence pus is easily made to flow into the wound."*

These explorations must be made with the greatest care. One must not forget that the adhesions are recent and consequently very fragile; that in exploring with the finger at haphazard and without precaution one might easily break such as are important, and cause irruption of pus into the large peritoneal cavity. At the same time, an attentive examination of the walls of the abscess, and the tracing out and bringing into light of any and all diverticula and prolongations which the pus sac may present, are indispensable. The pus cavity is often multilocular, with well formed dissepiments, and there is danger of overlooking one or more of these pockets and leaving them intact after evacuation of the principal "*foyer*," and this would render the operation of no effect.

Besides, the surgeon will search for foreign bodies, scybala, etc., which may be found in the abscess cavity. And lastly, he will endeavor to form an estimate of the condition of the appendix.

Here an important question comes up: Should the appendix be resected and removed?

In certain cases the question is easily answered; the appendix is already gangrenous and detached from the cæcum; it floats in the midst of purulent débris, and escapes with the first flow of pus, or may be easily removed with forceps.

In other cases the appendix, though perforated and partly gangrenous, is still attached to the cæcum, but is easily reached by the hand, and is found agglutinated to the walls of the abscess or to an intestinal coil. The thing to do then is to put a tight catgut ligature above the gangrenous parts, at a point where the tissues seem sound, then to cut and remove all the diseased portion. According to Treves, if the gangrene is total, or if the perforation is seated in the vicinity of the point of cæcal attachment, it is better not to attempt to apply a ligature or remove the appendix—the elimination will take place of itself and without danger.

But there are cases where the appendix, deviated or fixed in an abnormal position, or lost in the midst of plastic peritoneal exudates, cannot be found. Shall we persist in hunting for it, and in detaching it from the adhesions which bind it down? Most authorities counsel letting it alone. "When the appendix," says Treves, "is very adherent, it is better to make no attempt to remove it by dissection, or even to separate it from its adhesions."

Weir thinks also that it is well to excise the appendix when it can be easily reached, but it is not best to lose time in searching for it. It does not seem to do any harm, he says, when it is left, and ordinarily it sloughs away in a few days.

MacBurney is also of opinion that it is best not to waste time in the search for the appendix; but he adds that to leave the appendix behind is not without danger.

*Roux, Revue Méd. de la Suisse Romande, April and May, 1890.

Porter takes the same view, and reports a case in which, after an operation for suppurative perityphlitis, the appendix was left behind and gave rise to a series of recurrences which finally necessitated its ablation at the end of a year.*

Morton insists that the operation cannot be regarded as complete unless the appendix is removed. Fear of opening the peritoneal cavity should never lead one to hesitate to dissect with the finger in order to expose the appendix, and then to resect it. The only contrary indication is when the appendix is lost in the midst of a thickened and resistant mass of plastic adhesions, which would render the isolation and ablation of the organ so difficult or so prolonged as to jeopardize the patient's chances.

As will be seen, every case must be decided on its own merits and according to the degree of vital resistance of the patient and the time required for the operation. In fact, the fear of breaking up useful adhesions and causing perforation into a healthy peritoneal cavity will always hold a prudent surgeon in check, and prevent too prolonged a search for the appendix and too prolonged a dissection. While, then, regretting that he is not able to finish the operation and relieve the patient of a useless and dangerous organ, the operator will do well to hold to the rule laid down by Treves and Weir.

After having attentively explored the walls of the abscess and disposed of the appendix (whether resected or left), the abscess cavity is carefully and gently washed out by means of a gentle stream, from a fountain-syringe, of a warm antiseptic solution. When it is necessary to wash out the peritoneal cavity, as in the case of general peritonitis, only boiled water should be used.

The surgeon then introduces deep down into the wound, to the bottom of the pus cavity, a large drainage-tube or a tent of iodoform gauze. Some surgeons, while leaving a drainage-tube or wick of gauze, advise to sew up the greater part of the opening in order to oppose the tendency to hernia. The surgeon will, moreover, always be ready to remove the sutures if he should observe the supervention of swelling or of infiltration of the walls, or if drainage does not seem to go on in a satisfactory manner.

If the total gangrene of the appendix or rupture of the abscess into the intestine has produced an opening into the cæcum, must the surgeon attempt, before completing the operation, to close up the opening by sutures? No; sutures at this time would probably be useless and would not hold, although reunion has been once or twice attempted with success by means of Lembert's sutures. Moreover, the facts prove that cæcal fistulas tend of themselves to cicatrization in a few weeks' time. If, however, the fistula does not close of itself, it may be necessary after a few months to make a new incision and freshen up the edges of the opening into the cæcum, then to close the opening with Lembert's sutures.

TREATMENT OF RELAPSING APPENDICITIS.

We have established an absolute distinction, from the clinical point of view, between the recurrence of appendicitis and relapsing appendicitis properly so called. This clinical distinction, from our point of view, makes the matter of treatment more simple. If physicians have been and still are hostile to the treatment proposed by Treves in 1887, it is because, consciously or not, they confound relapsing appendicitis—a chronic disease with successive acute crises—with simple recurrence, a fortuitous accident which is not necessarily a consequence of the first attack.

The principal objection to Treves' operation is, in fact, that one is never certain that the patient will ever have another attack. This is true of simple recurrence. Two or three attacks at long intervals, with good health between the attacks, hardly warrant one in affirming that there will be certainly another recurrence. However, each recurrence has its own proper evolution, and there is no means of knowing from the way previous attacks have terminated whether succeeding attacks are to be as favorable; the latter may be peritoneal or perforating, while the first were limited strictly to the appendix. On the other hand, in relapsing appendicitis the successive returns of the disease are linked to a chronic and permanent lesion

* Boston Medical and Surgical Journal, Dec. 25, 1890.

—dilatation of the mucous cavity of the appendix, the presence of a foreign body, a little purulent juxta-appendicular focus. In these cases, not only are the relapses dependent on the previous attacks, and repeated at short intervals, but they also engender at last a chronic state of intestinal suffering comparable to the abdominal consequences produced in the female by a salpingitis or an alteration of the annexes.

It is to this form only that the treatment proposed by Treves is applicable: the resection of the appendix in the interval of two acute attacks. Treves has himself protested against the abuse which American surgeons have made of this operation in applying it indiscriminately to all cases of appendicitis under pretext of possible recurrence.

The real objection to such a procedure would be the fact of the cure of recurrent appendicitis by the aid of medical means alone. Although we are not aware that absolute proof of such cure exists, it does not appear to us improbable; and among these medical means we may specify rest in bed, rigorous diet, local revulsives, vesicatories, punctiform cauterizations, etc.

But it is evident that purely medical treatment demands not only long months of inaction, but the greatest care of himself on the part of the patient, as the least imprudence of any sort may provoke a relapse and undo all the benefit that has been derived from the treatment. It is evident, too, that such minute attention, such exact supervision, and all this loss of time, are for the rich rather than for poor people who are obliged to work all the time in order to live. Practically, then, it has been found that patients are likely to tire of the medical treatment, which demands so much self-denial, so much inaction, and so much patient waiting, and sooner or later put themselves in the hands of the surgeon for more radical treatment.

A second objection is the difficulty and dangers of the operation. If we may believe some surgeons, this objection does not exist. Senn does not hesitate to write: "The excision of the appendix is one of the most sure and easy of all the intra-abdominal operations."* This is possibly true in cases of simple appendicitis, where the operation is really not necessary and ought to be interdicted. It is perhaps also true in cases of relapsing appendicitis where the crises are due to an appendix simply thickened and dilated. The operation is of very doubtful expediency in numerous cases of appendicitis with suppurative peritonitis; it is impracticable and to be condemned when the relapses are caused by a chronic plastic and adhesive inflammation of the peri-appendicular peritoneum.

Treves points out the difficulties, under such circumstances, of resection of the appendix. These operations, he says, are delicate, often complicated, and frequently very difficult. In certain cases ablation is simple enough and may be done in a few minutes; in many others the thickening of the tissues and the rigidity of the peritoneal adhesions are so great that the confusion becomes almost inextricable and there is danger at any moment of doing serious harm to the intestine, the ureter, and some important blood-vessel.

On many occasions the best operators have been obliged to suspend the operation, not only without having been able to resect the appendix, but even without finding the organ, lost in the midst of its resistant adhesions.

Bull reports the case of a woman aged 63 years, who was a victim of chronic appendicitis, with relapses coming on regularly every three weeks. Laparotomy was performed, and the appendix was found embedded in so thick a mass of plastic exudates that he preferred to close up the wound rather than to expose the patient to the risks of a dissection which would have required a dangerous length of time for its completion. In another case, where he expected to find an abscess, he came down upon the appendix fixed by such strong adhesions that he judged it not prudent to attempt the excision.

Lastly, Morton, after having remarked the dangers which arise from the density and the organization of the adhesions, admits that several patients have succumbed, exhausted by the length of the operation, it being possible to disengage the appendix only at the cost of a minute dissection from the midst of the

* Journal of the American Medical Association, November, 1889.

fibroid exudation where it was found imprisoned.

It must not be said, then, that the resection of the appendix is a simple and easy operation. It is sometimes extremely painful; and the surgeon, in proposing the operation, should be prepared for every difficulty and every surprise. It is for him, and also for the patient, to weigh well the risks of the operation. Yet I think that, even in the face of these attendant risks, the patient will not hesitate long, and that at the fourth or fifth return of the appendicitis he will come of his own accord to demand the operation.

This moment, moreover, seems to us the most favorable for interference, especially if the relapses are close to one another or come on at regular intervals. After one or two relapses, the physician as well as the patient may hope that the present crisis will be the last, or that rest and revulsives will prevent another attack. But after four or five relapses, there is no longer ground for expecting a cure by medical means; one may be certain of another attack after a short time; besides, the symptoms in the interval of the acute crises—cæcal atony, and mucous catarrh of the large intestine—begin to develop. There is no longer reason to doubt the existence of a permanent lesion with successive outbreaks. The powerlessness of medical means being demonstrated, surgical intervention seems to us clearly indicated.

What moment should be chosen to operate? The interval between two relapses, or the first days of the next attack?

Dennis, of New York, is opposed to the operation during the period of calm—for, he says, we can never be certain that there will be another attack. He proposes, as a compromise, to await the next relapse, and then to excise the appendix on the second or third day.

This is also Morton's advice, but for different reasons; he, as a general rule, disapproves of the operation in the interval of two attacks, on account of the difficulties and dangers which the ablation of the appendix presents when embedded in peritoneal adhesions. He prefers resection made on the first or second day of the next attack. But it is not easy to see how a new attack would facilitate the dissection of the appendix, or in what way it could remedy the abundance and density of the adhesions.

Just here, it is worth considering whether it is not more dangerous to operate in a period of inflammatory reaction than in a period of lull. According to Treves, it is a surgical axiom to abstain, unless in cases of extreme urgency, from all operations in the midst of inflamed tissues. To wait for an acute attack to make a resection which demands all the delicacy of plastic surgery, is to choose the most unfavorable moment and the worst conditions for an operation.

The following course of conduct will probably meet with favor among surgeons: If, after a series of repeated attacks, which are near together, the diagnosis of relapsing appendicitis is regarded as beyond question, and there are, after careful exploration, good reasons to believe that the appendix is only thickened and dilated, one may, as Treves advises, properly await the interval between two attacks to make the resection, which in such a case is ordinarily very easy. Secondly, if the relapses are due to the existence of a purulent collection in the neighborhood of the appendix, provoked probably by a foreign body, and especially if each return is accompanied by the formation of an external abscess, the surgeon will make a free incision during an attack and evacuate the pus and irritant body, and will excise the appendix if it can be easily found. Finally, if the relapses are very numerous and, according to the clinical characters which they present, seem to be due to repeated attacks of plastic peritonitis, and if in consequence there is reason to suspect old and thick adhesions, it might be well to follow the advice of Dennis and Morton and wait till another and severer attack shall overcome any hesitation on the part of the patient. The presence of numerous strong adhesions limits the area of inflammation, and renders little probable any further extension to the peritoneum and the dangerous consequences which Treves thinks are likely to follow an operation made during the acute inflammatory stage. Doubtless the task of the operator will not be facilitated by virtue of such acute inflammatory attack.

The following are the rules laid down by Treves for the operation when done in the

interval of two relapses: Every symptom of inflammation having ceased, and the position of the appendix being determined as nearly as possible, the incision will be made obliquely from above downward and inward, over the cæcal region, its inferior extremity terminating just outside the epigastric artery. The incision should not be made directly over the appendix or over the dull region; for by making the incision there you would probably encounter adhesions, and it would be difficult to know whether you were or were not inside the cavity of the peritoneum. The cæcum or the appendix may be found adherent to the anterior wall. The peritoneal incision will then be made with the greatest care. It is better that the parietal section shall open the abdomen exactly opposite the diseased region, where there exist no adhesions. When the appendix and the cæcum are uncovered, the field of operation will be separated by sponges from the great abdominal cavity; if this be well done, not a drop of blood will enter the peritoneal cavity. All the adhesions will be divided on the bistoury; they must not be torn; by tearing them the surgeon would run the risk of lacerating the intestine or peritoneum. The appendix will be divided half an inch from the cæcum; the surgeon will not be content with tying it with a simple ligature. The mucosa will be brought together by several fine sutures or by a continuous suture; then the external coats will be approximated by a new line of sutures. When the walls are very thick, it is impossible to suture the serous coats together. To render certain the obliteration of the orifice, the surgeon will fix the stump of the appendix to some neighboring portion of the peritoneum. The abdominal incision will then be closed; no drainage tube is to be inserted. During the operation every adhesion liable to become the cause of after-troubles should be destroyed; this applies more particularly to omental adhesions or to those which may exist between the intestinal coils.

Such are the rules laid down by Treves and followed by most surgeons, English and American, in the treatment of relapsing appendicitis.

I will in closing call attention to a last point, *i.e.*, the possibility of a ventral hernia as a consequence of the operation. This kind of hernia does not seem to be rare in America; Bull says he has seen a dozen cases of it in the space of a few months in New York. Hence the American surgeons insist on the necessity of carefully making the suture of the walls layer by layer; it is the best means of insuring a solid union by first intention and avoiding this disastrous consequence. It is, moreover, a good plan to have the patient wear for some time a Glénard's abdominal belt, as Roux of Lausanne advises.

In fine, whether the case is of acute or chronic form, the treatment of appendicitis cannot belong exclusively to either the physician or the surgeon. The first has too great a tendency to temporize, which is often fatal to the patient; the second is too prone to have immediate recourse to the knife, which is often unnecessary. Only the harmonious coöperation of the two can bring about a wise and wholesome appreciation of the responsibilities and duties of the situation.

"The first indication in appendicitis," says W. W. Keen, "is to call in the surgeon." This is true with some qualification. The physician should know just when to summon the surgeon, and the surgeon just when to operate and when not to operate.

Paris, France.

A SERIOUS CASE OF REFLEX IRRITATION.

BY DAVID INGLIS, M.D.*

The following case, which was kindly referred to me by Dr. Alton, of Portland, deserves to be reported, both on account of its unusual character and on account of the successful result already obtained.

The patient, a farmer, aged 32 years, came on August 25, 1892, complaining of attacks of vomiting of a peculiar kind. The attack began by an aching pain in the dorsal spine. The pain gradually involved the spine higher and higher until it reached the head; here it spread over the occiput and up to the vertex, then over both parietal regions. In proportion as the pain spread, it became more

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intense, so that by the time it had reached the occiput he described it as intolerable. At this time vomiting began; and now, for twelve hours, the vomiting persisted. During this time he also experienced severe pain over one or both eyes—"the pain centered there." As the attack passed off, the pains seemed to follow a reverse course, ending again at the dorsal spine. Bad as the pains were, the patient's most bitter complaint was of the uncontrollable vomiting which made life no longer desirable.

Such was the nature of the seizure. Now as to the history of the case. It appeared that for four months preceding his visit to me the attacks had recurred with great regularity, once in every six days. So profound was the depression caused by the attacks that he failed to fairly recover from one attack before the next one came on. It resulted that the patient was weak, losing flesh, and appetite impaired. Before the period mentioned (the four months), the attacks has been quite as severe, but the intervals were longer, and during this time the patient's health and digestion had been excellent and he seemed to recover his vigor and good spirits within a very few minutes after the cessation of the vomiting. He could eat heartily immediately after the attack passed off.

The entire duration of these seizures had been six years, during which time medication and dieting had been variously carried out without benefit.

He attributed the trouble to an attack of "catarrhal fever" which occurred six years ago, before which time he had considered himself a tough, wiry, athletic man—as he expressed it, "used to hard work and liked it." The only illness he could mention was "occasional slight sick-headaches since childhood."

The family history was good. Patient's own habits excellent except for the too free use of tobacco. He denied any specific infection. Urinalysis gave negative results. Constipated, as a rule. General physical examination showed no organic defect of either chest or abdominal organs. Pupillary and patellar reflexes normal.

The thought of the vomiting spells being gastric crises suggested the possibility of locomotor ataxia, but all other symptoms negatived this. The more I eliminated as possible causes, the more I was driven to regard the case as essentially a reflex neurosis.

So intimate, has experience shown me, is the association of periodical attacks of migraine with eye-strain, that I at once told him that the first thing to be done was to have his eyes thoroughly tested.

Again, so directly did the attacks follow upon the occurrence of the "catarrhal fever" (during which there was a very bad discharge from the nose) I could not avoid thinking that in the nasal passages might be found the source of the reflex irritation. The fact of an existing nasal catarrh and a hardened tonsil made this more probable.

I therefore sent him to my friend Dr. Don M. Campbell, who reported as follows:

"*Dear Doctor Inglis:* I have carefully examined the patient. I find a very considerable amount of trouble both in the nose and throat, and also in the eye. He has a well marked hypertrophic rhinitis; the mucous membrane overlying the turbinated bone is very much hypertrophied. He shows a good deal of pharyngeal irritation. Ear-drum thickened and in-drawn. The testing of his eyes shows that the muscles are in equilibrium but all intrinsically weak. His refraction, under a mydriatic, shows right eye myopic with a high degree of astigmatism; left eye, mixed astigmatism of a mild degree. I would think that all these nasal and ocular defects would have a strong bearing on his headaches."

Now for results: Dr. Campbell fitted him with proper glasses and has since been treating the nasal difficulty. I gave him a preparation of diastase to aid stomach digestion; also 3 grains of antifebrin after supper and a similar dose at bedtime. The patient has regained in four months his full weight, has his old-time vigor, can work freely, and has only vomited three times in four months. The vomiting on these occasions, instead of lasting twelve hours, simply consisted in emptying the contents of the stomach. He has had occasional headaches of moderate type, and these are less and less frequent.

Such a result is not only a happy one for the patient, but a striking commentary upon

the necessity for carefully searching for obscure causes of disease. No medication, however skillful, could accomplish what was rapidly done by the removal of a reflex irritant.

As to which was primarily the source of irritation in this case, the ocular defect or the nasal one, it is, of course, impossible to say with certainty. My own impression, however, is that the nasal trouble was probably the more important one. The remarkable frequency with which nasal irritation can be clearly recognized as the cause of asthma makes me feel that in this case we have to deal with a similar reflex disturbance.

It has seemed to me that the profession is only beginning to wake up to the widespread relation of intranasal disorders to functional disturbances of the nervous system. I have had reason to attribute to nasal trouble not only asthma, coughs, various gastric disturbances, but melancholia, chorea, and epilepsy.

21 State street, Detroit, Mich.

THE MORBID ANATOMY AND DIAGNOSIS OF CHOLERA.

BY JAMES TYSON, M.D.*

The picture of the essential morbid anatomy of cholera is neither complex nor varied, but repeats itself with tolerable simplicity and uniformity. A comparison with the more condensed accounts leads me to believe that its essentials do not include much more than is covered by the description of an autopsy made by myself at the Philadelphia Hospital in 1866 or 1867:

The patient was a woman, aged 29, who died after an illness of twenty-four hours.

The examination was made one hour after death, and the central portions of the body were still warm.

Abdomen.—The stomach was filled with turbid liquid, grayish-white in color, resembling rice-water. In this the microscope discovered numerous columnar epithelial cells, isolated and aggregated, forming flakes; also disintegrating muscular fasciculi, doubtless from beef-essence taken during life. The mucous membrane of the stomach appeared much congested, and the distribution of the larger vessels could be readily traced in consequence of their being filled with thick blood. My notes read that the papillated appearance ascribed to enlargement of the solitary follicles was present, though less distinct than that described in published reports of post-mortem appearances.

The epithelium was detached in some places, in others intact.

The mucous membrane of the small intestine was also much congested; the bowel contained no fluid, but was distended with gas. On its surface lay numerous patches or flakes of greenish color, which on microscopic examination proved to be epithelium. The papillated appearance produced by enlargement of the lymphadenoid follicles was everywhere present.

Microscopic examination showed the villi largely denuded of epithelium, but not completely, and in places a considerable surface was intact.

The liver was natural in size, but congested and darker-hued than in health. Its cells, as determined by microscopic examination, were normal.

The kidneys were normal in size, but appeared dark-hued and congested. The tubules and lining cells were normal.

Thorax.—Both lungs were firmly attached by old adhesions; the lower lobe of each was hypostatically congested, but otherwise they were normal.

The heart was normal in size, but its walls were somewhat flaccid. There was a small, currant-jelly clot in the right ventricle; and the remainder of the cavity, as well as the left ventricle, was filled with dark, liquid blood.

Such is the description of the appearances found at an autopsy twenty-five years ago, one of several made at that time, and, with some changes, it may be regarded as a type of those cases. In most cases the intestines also contained the rice-water liquid; in some this was absent from the stomach. The appearances are not materially different from the macroscopic morbid features of the more recently described cases. The additions that modern studies have made are histologic rather than macroscopic, but they are of infinite importance. In addition to a cellular infiltration, more or less dense, of the mucosa, the submucosa, and even the serous coat, there is found the *comma bacillus* in immense numbers in the contents of the intestine, more rarely in the stomach, and in

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protracted cases in the intestinal wall, in its follicles, and even deeper tissues.

The congestions referred to as present in the lungs and mucous membrane of the stomach and intestines in my case, would seem to indicate that some reaction had been established, as these organs are commonly anæmic when death takes place during collapse. The same is true of the liver and kidneys, which are more frequently described as pale and flaccid. The heart more frequently has its right cavities filled with thick, dark blood, while the left side is empty. In many instances the lungs also present an appearance more or less characteristic, being shrunken and small and lying back in the thorax, as though collapsed. Under these circumstances they are like the other tissues, empty of blood, except in their dependent portions, which are the seat of a hypostasis such as described in my own case. They have been compared by Parkes to fœtal lungs, and by Sutton the two organs were found to weigh but twenty ounces, as compared with forty-five ounces when death occurred after reaction had been established—that is, after the blood had again occupied the pulmonary artery and its branches. In some cases this collapse is but partial, as when interfered with by adhesions, as also was found to be the case in my own patient.

Such appearances could, of course, occur in death from hæmorrhage, and, after all, the only essential condition is the presence of rice-water fluid in the stomach or intestine, or in both, containing the "comma" bacillus and desquamated epithelium. The last, to which the earlier descriptions attached great importance, is now generally regarded as post-mortem in origin. The flakes thus produced probably represent also the patches of lymph described by the earlier authors.

If death take place during the stage of imperfect reaction, the mucous membrane is much more frequently found congested and of a dark-red color, from the hyperæmia and extravasation of blood. At such time, too, the solitary glands are conspicuous, as also are Peyer's patches, and the same denudation of epithelium from the villi and elsewhere is present. The only signs that suggest an inflammatory process are the slight cellular infiltration of the intestinal walls and the enlargement of the solitary follicles.

In the matter of *diagnosis* it is well known that, so far as symptoms are concerned, cases of cholera morbus, cholera nostras, or sporadic cholera, as we may prefer to name it, have occurred with symptoms absolutely identical with those of true cholera, including the fatal termination. It is not worth while, therefore, to attempt to contrast the clinical features of true cholera with those of cholera morbus, with which alone it is likely to be confounded. By bacteriological investigation only, including also cultivation on artificial media, can a given case be identified with absolute certainty. Dr. Abbott informs me, however, that fifty-two hours is the minimum time required to complete such a bacteriological diagnosis. Further, such investigations can only be made by those who are expert and provided with proper facilities. Such expertness and facilities, moreover, are not found in the hands of general practitioners, and the bacteriological investigation is therefore of limited application.

As to microscopic examination of the dejecta, which is more feasible for the practitioner, it may also be said that if the examination reveals a preponderance of curved bacilli, comma-shaped, and sometimes joined end to end so as to form figures somewhat resembling the letter S, and again appearing in longer threads, we may feel justified in considering the case one for careful study by bacteriological methods. Although there are found in the alimentary tract other bacilli the morphology of which is much like that of the cholera bacillus, they are not numerous.

How, then, shall we know a case of vomiting, serous diarrhœa, severe colicky pains, followed by collapse, to be a case of cholera? In this country, where such a thing as endemic cholera is unknown, it goes without saying that any isolated case, even if fatal, cannot be one of true cholera, unless there be traceable some connection with an acknowledged focus of cholera elsewhere. Second, such communication must have taken place within the period of incubation required for the development of a case—say within six days. Of course, such communi-

cation need not be a personal one: it may be by clothing, merchandise, and probably even by letter.

These conditions being fulfilled, the patient suffering with the symptoms of cholera must, for the time being, be regarded as a case of the true disease, and isolated until the bacteriological investigation can be made: but the rapid occurrence of similar cases increases the probability of its being true cholera, and finally establishes its certainty. Yet local epidemics of cholera morbus do sometimes take place, severe and grave in character, due to local causes, and favored by extreme and long-continued heat. Thus it is still a question whether the recent epidemic of cholerine that prevailed in Paris in May, June, and July of this year was true cholera or cholera-morbus, and there seems much reason to believe it to have been the latter, notwithstanding the prevalence of true cholera.

There is one very important ætiological rather than clinical difference in the two diseases, which is also of great diagnostic value, and that is this: that almost invariably cholera morbus is traceable to a severe and irritating exciting cause, such as a meal of indigestible fruits or vegetables, or imperfectly cooked or decomposing fish or shell-fish; while cholera comes on without any such cause, or succeeds trifling derangements of digestion which in other than cholera seasons pass away without harmful results. As a rule, too, the symptoms of cholera morbus are much less severe than those of true cholera, and the matters first vomited are the undigested matters that have acted as the exciting cause, succeeded by green, bilious matter. The discharges from the bowels are also at first more of a bilious character; and, above all, the mortality is much less serious; indeed, recovery is the rule. Yet, as already stated, these differences are not to be relied upon.

Philadelphia, Pa., Sept. 14, 1892.

SALO-SEDATUS AND SULPHO-CARBOLATE OF ZINC IN TYPHOID FEVER.

A St. Louis correspondent reports the following treatment as adopted during the prevalence of typhoid in the recent St. Louis epidemic: No solid food nor stimulants were allowed in any case. Hot milk was the principal article of diet. In cases where this did not suit the patient, Horlick's malted milk, chicken broth and beef tea were given in its place.

When the tongue presented a pale, ashy, or dirty white appearance, sulphite of soda was given:

Sulphite of soda, ʒ j.
Water, ℥ iv.
M. One teaspoonful every hour while awake.

Where the tongue was red we gave sulphuric acid:

Sulphuric acid (c.p.), gtt. ij.
Water, ℥ iv.
M. One teaspoonful every hour.

To control the temperature, relieve pain, and get rest, we gave Salo-sedatus, in doses ranging from 3 to 10 grains, at intervals of two, four, or six hours, as each case seemed to require. It gave perfect relief from pain in the head, and quiet sleep was invariably enjoyed under its influence. Unlike veratrum and antipyrin, Salo-sedatus neither sickens the stomach nor depresses the patient. It certainly exerts a powerful sedative influence without disturbing the digestive organs or exhausting the vitality. We ascribe these happy effects, in great part, to the positive antiseptic properties of this compound. It undoubtedly meets the important indications in such diseases. It reduces the temperature, relieves pain when present, and induces sleep.

For the bowel complications we invariably prescribe:

℞ Sulpho-carbolate of zinc, ʒ ss.
Subnitrate of bismuth, ʒ ij.
M. Divide into twelve powders. Sig.: One powder every two, four, or six hours, as required to restrain the discharges.

The sulpho-carbolate of zinc is certainly a great remedy in typhoid fever, especially when there is diarrhœa or hæmorrhage. It almost completely deodorizes the discharges, and to control the hæmorrhage we have never used anything that approached it in value. We used no opium in any form, no morphine, in a single case. Sulphite of soda, sulphuric acid, Salo-sedatus, sulpho-carbolate of zinc, and subnitrate of bismuth were the remedies.

Correspondence.

AT THE MEDICAL BANQUET—BUTTE, MONTANA, 1892.

DEAR EDITOR—To preserve an outline of a banquet given to the State Medical Association of Montana at their annual meeting held at Butte City, Mont., April, 1892, by the members of the local Society; and for the pleasure of those who love to remember pleasant things; and that others, seeing our good works, may do likewise, I send you the following brief of toasts—omitting responses, which, although the best part in a literary and medical sense, would make too long a paper.

After the wines had sufficiently blurred self-consciousness to render each individual duly proud of his own personal effects and attainments, Toast-master Dr. L. E. Holmes arose and said: "According to mandates which are becoming more and more arbitrary in this age of Science and Reason, everything that *is* must give a reason for its existence. It is now claimed that every effect must have a cause. Even a reason is demanded of life for its being on our globe. Touching this latter problem, it has been difficult, outside of Revelation, to give cause: the stream cannot rise above its source, except in vapors too misty for deduction—and that seems about our present state. But to condense a little: Our problem to-night is much less difficult. It is to show cause for this banquet. This banquet is the performance of a duty by the Silver Bow County Medical Society. It is demanded of us. In fact, the greatest good of the State demands that we tender this banquet to the State Medical Association of Montana, with their wives and daughters. The most elevating principles and instincts of humanity—family-binding, life-purifying, society-elevating—require the strength, integrity, honor, firmness, and purity of our profession for their support, throwing its influence, as it does, around the homes, hearths, and hearts of the people. For strength this profession needs union amongst its followers, which can only be maintained by friendliness cemented most closely by social family ties. Friendliness will be the basis of ethics and honor among its devotees. Honor will preserve purity among medical men, and through their lives and deeds elevate and purify civilized society at large. Purity preserves the family bonds; the family preserves society, the state, and civil government, intact. Union amongst us will drive out quackery and fraud, the darkest blotch on American civilization, which touches the lives of our men, women, and children. It will elevate and advance useful knowledge and the prosperity and happiness of the human race. It is our noble profession that has elevated and advanced these against darkness and ignorance from time immemorial. This is our reason to-night.

"But no more of this from me—others will speak, as you shall see; for speaking is an energy and yearning that comes by subtlest turning of compounds the blood is burning in the brain. These viands that we give to you, with wines of Champagne and Bordeaux, by chemico-physical combining will give your blood such rapturous chiming, and your brains such pleasing twining of visions, dreams, and logic mining, that your tongue cannot withhold the music that the globules of the blood have told thee, or the combinations from Psyche's lab'ratory, in many a speech and sparkling story of the wise ways, old and hoary, of the fathers; of the days as we have made them; of our doings, and those who aid them; and all the doctors' patients who have paid them; and all the rest that banquets lead to. But 'tis not best that I should plead too much before I open up our richer store; and, so we drink a toast to these our guests (a host, too):

1. THE STATE MEDICAL ASSOCIATION.—
To bind more close our charmed relation.
Response to which I call—happy so!—
Upon our esteemed Doctor G. W. Monroe.

2. OUR LOCAL SOCIETIES!—Family altars
Where we offer to our God our best;
Where we encourage the one who falters,
And learn fair courtesy of heaven blest—
To do this subject's pictured warp
I call on Doctor Gelsthorp.

3. THE MEDICAL PROFESSION.—A true light!
As the stars shine out thro' the darkness of night,
Its knowledge gave light thro' all the dark ages,
And redeems there alone history's drear pages.
That this may be shown and clearly put,
I call on Doctor R. M. Whitefoot.

4. PATRIS MEDICINÆ.—Long may they be
Preserved to us in rich-stored memory!
Of the rich lore that fills their tomes so well,
That we love to read as a romance still,
I call on Doctor Wm. Shultz to tell.

5. THE MEDICAL PRESS!—Pressed, I've pressed the press
To find some word its express power t' express
O'er lives of doctors pressed, repressed—Cheese it!
Let Doctor Hammond take the press and squeeze it.

6. OUR PATIENTS.—Secundum artem fitted,
Prescribed for, doctored, pleased, and fondly pitied.
Now in the flowing bowl so freely toasted.
Some are gone to where they may be roasted.
And some to find some doctors better posted
Sneering at the skill of which we've boasted;
And some, alas! remaining here, their best do
To keep all us poor doctors in a blest stew.
But, dearest Doctor, why so grieve and ponder?
Remember your reward is over yonder.
This subject, all, with we's, and she's, and full herd,
I give to Doctor William M. Bullard.

7. THE MICROBE!
Mine eyes are old and dim;
I can't see him,
Tho' I know he's in the swim;
If Doctor J. J. McDonald can,
He's our microbe-doctor-man.

[This response was a literary curiosity, replete with wit and humor; full of such terms as (one that I remember): "*Let my crow be* that I collect my well earned fee."]

8. THE COUNTRY DOCTOR.—
"O good morning, Doc.!
'Matter down t' mill?"—"Boy?"—"Don't say! Lord bless me!
Just married!—Well; t' old ones 't must be quite a shock."
"That bill?"—"*Doc.!!!*—hard times, hard times! Don't press me."
I call on Doctor J. H. Owings
To give account of country doings.

9. THE CITY DOCTOR!—Here I'm clean gi'n out;
The gentleman refer'd to 's sich a sprout!
His kids, silk hat, and cane, and long surtout!
I'm dazed—excuse!—don't know what I'm about.
I call on Doctor Geo. W. King
To give the city doctor's mettle ring.

10. THE DOCTOR'S WIFE.—
She arose, and it was morning.
Her presence all the day adorning,
And the air was balmy sweet.
Refreshment met the going
And the coming;
And withouten wearied feet,
And unawares
We conquered cares.
And often thro' the day
Her fingers made small garments,
And flowers of lace like those of May;
Her busying with little things
Seemed the toys of fairy dreams.
—Rest was there—refreshing rest,
In soft, hushed sleep,
In air of light perfume,
Such as purpled ipomœas keep,
Narcosed in their own soft bloom.

When all the work of day
Was hushed and laid away,
And all the stars were lighted,
We knew again the love we plighted;
We walked beneath the stars,
And talked of Juno and of Mars,
While glinted thro' the crystal bars
Heaven:
Or sailed across an unknown sea,
Returning any moment, presently,
On Psyche's wing,
To pluck a flower,
Or hear a bird sing.

But if a sound arose,
A sigh, or pierced air, or etherphone—
When we were not two alone,
We parted,
As the rosebud parts to bloom
Whose perfume fills the air—
There was no intervening room,
Since heart and spirit hovered there;
But the bustle of the world arose
Around with elemental jar,
And life's hard war.

Now near life's close,
Love, thro' smiles and tears,
Thro' all the toil of other years,
With lightest sigh, without regret,
Looks with calm repose
For what may greet us yet.

Mrs. J. W. Gunn, a doctor's wife,
Will tell us what she thinks of this life.

[This response was in verse, full of witty turns, causing prolonged applause.]

11. THE NEW MEMBERS OF OUR STATE ASSOCIATION.
We want new breath to speak of this long-named relation.
They've answered well to this our spread of cold ration.
Now I'll turn them over to the next station,
And Doctor A. S. Longeway
Will offer their excuses, pray.

12. OUR ALMA MATER! We've chosen two
This mighty tender subject to review;
For all would gladly take a hand in
The dear old school we used to stand in,

And multiply in lofty praises
The virtues of her several phases.
So many were our schools of learning
We doubted which to take our turn in,
But ne'er regret that we went through
The far-famed halls of old Bellevue.
We don't believe in multiplying
Our schools to catch the brainless fry in,
Who seek some high profession.
Of old the family fool was sent
T' th' pulpit or the soldier's tent;
We do not scorn their mission.—
No, no; we think 'twere better far
If many were one brighter star.
High raised be our standards up,
Graded thro' longer years the courses winded,
Until no sapling there may sup,
Or linger in our halls the feeble-minded!
First to respond, I call on Dr. Philips,
What he leaves let Dr. Ellis fill up.

After these, informal toasts followed until every one present, except some of the ladies and a few invited guests, had spoken.

The banquet was enjoyed and praised by all, and a warmer chord of feeling and a higher sense of personal responsibility exists among the profession throughout the State in consequence of this social union together with our wives and daughters. And in scarcely a year's time quackery has diminished fifty per cent. in our midst.

TOAST-MASTER.

NEW YORK LETTER.

Prof. Hammond and the New Philosophy—Abdominal Aneurism Successfully Treated.

[Special Correspondence of the Medical Age.]

Dr. W. A. Hammond, Professor of Nervous Diseases at the New York Post-Graduate, has gained considerable popularity in the treatment of various forms of diseases of the essential organs by means of injecting into the system fluid extracts of corresponding organs from the lower animals. Were it not for the recognized prominence and high professional standing of the Professor, the plan would be regarded as a fake; but as it is the profession consider it a Koch-lymph, Brown-Séquard-elixir plan of treatment which demands a fair trial.

Professor Hammond has delivered several lectures at the Post-Graduate on the subject during the past month, and has shown the results of the treatment in several patients suffering from paralysis, neurasthenia, hysteria, insomnia, and various functional diseases, particularly of the nervous system. In many of the cases exhibited a marked improvement was noticed, but whether it was due to the therapeutical or to the moral influence of the injected extract has not been proven.

[In the AGE of Feb. 10, 1893, p. 91, Dr. Hammond's method is given in detail.]

The fact that Dr. Hammond is President of the American Neurological Society, retired Surgeon-General of the U. S. Army, a college lecturer, etc., is a greater causative element in the interest manifested in the treatment, then are the results which have thus far been obtained.

***

A patient was recently exhibited at a clinic in Bellevue Hospital who had been successfully operated upon, by McEwen's method, for aneurism of the external iliac artery. The patient was a man 35 years old. No history could be obtained except that he had a chancre fifteen years ago; two years ago, while lifting a heavy weight, he felt a tearing pain in the right groin, which was followed by a tumor in the abdomen between the umbilicus and Poupart's ligament. This tumor was diagnosed by the physicians to whom he went as an aneurism, and was treated accordingly. Moore's method was first tried; twenty or thirty yards of fine silver wire was introduced into the sac through a cannula in order to catch the fibrin and form a clot. This operation gave no beneficial results. Compression was next tried, but to no effect, and the tumor continued to enlarge and became more painful. About six months ago the man presented himself to Dr. J. D. Bryant. At that time the tumor was as large as a baby's head, showed distinct expansile pulsations synchronous with the heart's action, and a bruit was plainly heard which was transmitted downward into the femoral artery. The patient was greatly emaciated, and suffered intense pain radiating from the seat of the swelling, particularly down the right leg. McEwen's operation was decided upon, and several long needles, varying in thickness from ½ millimeter to 1 millimeter, were

made. Two of the smaller needles were introduced until their points reached the opposite interior wall of the sac. As the current of blood passed through the aneurism, it moved the needles, and their points irritated the lining of the sac. The locality of the irritation was changed every fifteen minutes, thus reaching the whole interior of the sac. The idea was to produce inflammation, and from this a proliferation of connective-tissue cells, leucocytes, and pus-cells, thus forming a white thrombus. These two needles were left in the aneurism twenty-four hours, but neither during this time nor after their removal did they seem to effect any appreciable change. Six days later two larger needles were introduced, and left in forty-eight hours. Within a few days the bruit lessened, and it entirely disappeared in two weeks. The pain gradually lessened, and in a few weeks had entirely disappeared. The pulsations ceased, and the tumor diminished in size, but there is still a large tumor in the right iliac region.

The success of the operation has created no little interest among New York surgeons. The fatality which attends abdominal and thoracic aneurisms, no matter what method of procedure is executed, has added much to the interest of this particular case.

New York City, Feb. 25, 1893.

SECTION ON MEDICAL PEDAGOGIES—PAN-AMERICAN MEDICAL CONGRESS.

The Pedagogic Section will devote its attention especially to the history of the development of medical education in America.

In the papers presented by leading teachers, recent advances in methods of instruction will be considered.

The Section in Medical Pedagogies will be made a prominent feature of the Congress, and the coöperation of those interested in medical education is earnestly solicited.

Any inquiries or communications may be made through the secretaries undersigned.

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The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE ADVANTAGES OF MEDICINE AS A CAREER.

Not enjoyment, and not sorrow,
Is our destined end or way,
But to act, that each to-morrow
Find us farther than to-day.

In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle;
Be a hero in the strife!

Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.

Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait.

—Longfellow.

Optimism is and should be more popular than pessimism. All hail to those who are able to inspire in others that vitalizing faith and enthusiasm which have developed savagery into modern civilization, and achieved that state of knowledge which characterizes the last decade of the nineteenth century.

The writer has just finished reading an article entitled "Medicine as a Career," by Dr. John S. Billings, published in The Forum for February, 1893, which is fruitful and fertile in suggestion as to what the physician of the future may become if properly prepared for his work, having opportunities for original research in the direction of the prevention and relief of departures from normal health.

The author of the paper believes that to the young man about to choose a professional career, medicine at this time offers opportunitics for the employment of the

highest mental faculties in the increase of knowledge for usefulness to the world, and for the attainment of true happiness, such as no other profession presents. By this he does not mean that it will certainly secure to its followers all, or, indeed, any of these things, but that, given the same degree of intellect with a good preliminary education, the probabilities are that out of a thousand men taking up the study of medicine, more will attain success than will do so among a similar number of young men of like character and attainments who devote themselves to theology, law, politics, or education.

Dr. Billings defines a successful career as one in which the man has done good work, the best of which he was capable—work in which he was strongly interested, and which in itself gave him pleasure—work done unselfishly because he believed it to be good work which ought to be done, and not merely performed as a means grudgingly made use of to obtain wealth, fame, or power. Such a career may secure a happy home and sufficient means to support it, although it may not lead to wealth.

Of all men the skilled physician stands nearest to the veil of Isis, which is becoming thinner though it may not be lifted. To one who has a thirst for knowledge for its own sake or as a means for the benefit of others, the problems of medicine for to-day offer peculiar attractions; for it is not that which is known, but that which is half known, mysterious, tantalizing, and which apparently might be known by such a study, which attracts such a man. Psycho-physics, the physiology, pathology, and therapeutics of the nervous system, are branches of medicine which as yet are only in their infancy, and in the study of which there are many modes of investigation yet to be tried.

One might indicate the possibilities, even the probabilities, that such diseases as diphtheria, hydrophobia, tetanus, rheumatism, yellow-fever, and cancer will in the near future be deprived of much of their danger by the results of scientific study.

Modern medicine possesses great knowledge and power—much more in some cases than it is allowed to use, because popular opinion has not yet been educated to the point of appreciating its value. It is in the curious position of continually offering advice which if accepted would greatly lessen the need of the public for its services. The medicine of the future is preventive medicine, that which will foresee the evil while it is yet afar off and take measures to avert it.

Those contemplating the adoption of medicine as a career should spend five years at a good intermediate school as a preliminary to entering the university, three or four years at the university, four years at the medical school, one and a-half years in the hospital, and two years in travel and special study.

PHYSICIANS AS BUSINESS MEN.

"This above all: To thine own self be true,
And it must follow, as the night the day,
Thou canst not then be false to any man."

This subject is discussed by the New York Medical Examiner editorially, the conclusions from its consideration being that the causes of lack in business ability of the physician are:

Their professional and preparatory training aims to cultivate the mind and reasoniug powers. Their pursuits appeal to their sympathies which as men of culture they cannot resist. They have been taught to look upon the practice of medicine as a divine gift and not as a means for gathering in the shekels. They are trained to command and not to bargain with the patients to secure an end. They are guided in their conduct by ethical rules and regulations, and not by so-called business customs. The customs of the past control them to a great degree, thus preventiug them from exercising their business talents in many directions outside of their profession. The business man has been trained to business from his youth up, as the physician has been to the practice of his profession, and, therefore, the physician ought not to be expected to be as good a business man as one who has spent his life in driving bargains.

The AGE believes the remedy for a deficit in the physician's income and his lack of business principle is a broader view of the practice of medicine than he ordinarily takes. "The workman is worthy of his hire;" and that physicians should pose as philanthropists and humanitarians and attempt to practice their life business on a sentimental basis, is foreign to the inexorable

laws that govern all occupations in this mundane sphere.

To modify the sentiments of Longfellow, the plan of life should be for the doctor "to be up and doing, with a heart for any fate; still achieving, still pursuing, learn to labor, and"—instead of "waiting" for his accounts, insist on collecting them when the medical service has been rendered.

He could thus spare himself and family the exigences now ensuing from his irregular and scanty income, and know "where he was at" from a financial point of view; and not only this, but have more inspiration for better work, and also a *raison d'être* which would infuse new vitality in his patients and teach his patronage the difference between *meum* and *tuum*, and give them healthy views that the doctor needs his fees as much as the butcher, the baker, and candlestick-maker, and that the doctor's account should not be paid the last on the list, but as promptly as other obligations necessitated by existence incurred with the general line of mercantile trade.

ELEVENTH INTERNATIONAL CONGRESS.

Immediately following the session of the coming Pan-American Medical Congress, a special line of ocean steamships will be at the service of the delegates and of all others who desire to visit the Eternal City on the occasion of the Eleventh International Medical Congress, the sessions of which will begin Sept. 24th and continue till Oct. 1st.

The admission fee for the International Congress is placed at the nominal sum of five dollars; and Dr. A. Jacobi, chairman of the American National Committee, has volunteered to forward application and fee for all who may desire him to do so; otherwise application should be made to the International Treasurer, Prof. L. Pagliani, Rome, Italy.

Papers intended for the Congress must be announced on or before June 30th, and a brief abstract of the same, with conclusions, sent to the committee on or before July 31st.

Italian, French, English, and German will be the official languages.

Reduced rates of fare and facilities for visiting noted localities in Italy have been provided.

Book Notices.

MINERAL SPRINGS AND HEALTH RESORTS OF CALIFORNIA. With a Complete Chemical Analysis of Every Important Mineral Water in the World. Illustrated. A Prize Essay. Annual Prize of the Medical Society of the State of California, awarded April 20, 1887. By Winslow Anderson, M.D., M.R.C.P. Lond., M.R.C.S. Eng., etc.; Joint Editor and Publisher of the Pacific Medical Journal; Assistant to the Chair of Medical Chemistry and Materia Medica, and Teacher of Chemistry in the Laboratories of the University of California in the Medical and Dental Departments; Member International Medical Congress; Member Congress of Hygiene and Demography; Member of the American Medical Association, and of the Medical Society of the State of California; Member of the San Francisco County Medical Society, of the College of Pharmacy, and of the Pharmaceutical Society; Secretary and Member of Alumni Association of Medical Department of University of California; Member of the Board of Medical Examiners for the State of California; Member of the National Educational Association; Analytical Chemist to the Coroner of the City of San Francisco; Author of "Desiccated Human Remains," "Adulterations in Food Products," "Western Mummies," "Mortality in Diphtheria," "Morphio-mania," etc., etc. San Francisco: The Bancroft Company. 1892.

The modern tendency of medical practice is in the direction of the prevention of disease, and the selection of alterative and tonic remedies agreeable to the taste and concentrated in form.

The value of mineral waters and health resorts is too little appreciated by the majority of the profession.

Few have made a careful study of the resources of this kind that our own country furnishes.

Dr. Anderson has gone very thoroughly into the examination and analysis of two hundred California springs and all the famous springs in America and abroad. His work is therefore a very exhaustive consideration of the subject. The therapeutic and medicinal action, and details of the proper and judicious application to diseases, have been ably presented. The many chronic articular disorders—rheumatism, rheumatic arthritis, synovitis, gout,—indigestion, dyspepsia, torpidity of the liver and intestinal tract, glandular enlargement, renal affections, including Bright's disease, irritation

and inflammation of the bladder, brick-dust deposit, calculus or stone in the bladder, diabetes, glandular disease, and scrofulous, syphilitic, and cutaneous affections, as modified or removed by mineral-water medication, all come in for a share of the author's attention.

The work contains sixty illustrations and much interesting information of California climatology and interesting views of the most prominent mineral springs, routes of travel, etc.

Short sketches have been added on the fertility and natural products of California; its historical account; climate; comparative thermometric tables and rain-fall.

From his investigations the author draws the inference that the golden shores of the Pacific compare favorably with all the most noted health resorts in the old or new world.

The work is published by The Bancroft Company, San Francisco, 1892, and comprises 384 pages.

A Text-Book of Practical Therapeutics: With Especial Reference to the Application of Remedial Measures to Disease, and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London, etc.; President of the Section of Therapeutics in the Pan-American Medical Congress. Third Edition. Enlarged and Thoroughly Revised. Cloth, $3.75; leather, $4.75. Philadelphia: Lea Brothers & Co. 1892.

Nothing succeeds like success. This is an age of rapid development of the materia medica, and the author has succeeded in crystallizing in one volume of 696 pages a most useful *résumé* of modern therapeutic practice.

There is an old adage that "There is nothing without labor," and this work shows the careful sifting and judicious selection that come from arduous investigation and long original research, which characterize the contributions of this author to all departments of therapeutics, and his grounding in physiological work as a basis of therapeutic suggestion.

Its popularity has been phenomenal. Just two years ago the book made its first appearance, and the rapid exhaustion of the editions has forced the author to be constantly engaged in revising the work and preparing it for the publisher. By this constant attention to the smallest detail connected with the book, the author has been able to present not only accurate information, but also the very latest reliable results obtained in the treatment of disease by those who have employed the newer remedies. In this edition directions are given for the use of drugs of such recent introduction as salophen, guaiacol, diuretin, europhen, thiol, phenocoll hydrochloride, piperazin, dermatol, pental, terpine hydrate, terpinol, and the salts of strontium. Much information has also been added to the articles on such drugs as salol, phenacetin, menthol, and similar comparatively recent remedies. Another important addition is a list of drugs arranged as far as possible according to their physiological action, and a list of definitions of the terms used to designate classes of drugs.

Among its features, which in many other books on therapeutics are lacking, is an alphabetically arranged table of doses of remedies; tables of relative weights and measures in the metric and apothecaries system; an index of drugs and remedial measures, and of diseases and remedies, which is an epitome of therapeutics in itself, for ready reference to the remedies for prevalent diseases.

Contents of New England Magazine for March, 1893.

This is a bright, entertaining, and instructive number. Among the articles is one on The Lesson of the Pan-American Congress, by Lieut. Chas. H. Harlow. This author comments on this subject as follows:

"The International American Congress, or Pan-American Congress, of 1889, was the realization of the dreams of Bolivar and some of the most thoughtful minds of this continent since his time. It had for its object 'the establishment of closer political, social, and commercial relations between the American people,' but it is a painful fact that its true significance was almost entirely lost sight of by the great mass of the people of the United States. To them it presented a wondrous example of the possibilities of

luxurious railroading. They saw the gorgeously equipped special train whirling about the country, and the princely entertainments that greeted the country's guests wherever they stopped, but they failed for the most part to appreciate that these gentlemen, assembled from all countries of this vast continent, each represented a commercial possibility as rich as the mines of '49."

Let us hope that the approaching Pan-American Congress may do much to secure uniformity of pharmaceutical nomenclature and processes of manufacture, and to unite scientifically, socially, and commercially these closely related and affiliated families of the American people.

Among other articles are the following:

With Dean Stanley and Phillips Brooks at Plymouth. George E. Ellis.

The University of Wisconsin. David B. Frankenburger.

The Study of Local History. Winfield S. Nevins.

The Massachusetts Prison System. Rev. Samuel J. Barrows.

The Mirror. Basil Tempest.

One at a Time. W. C. Richardson.

Negro Slavery in Old Deerfield. George Sheldon.

To Oliver Wendell Holmes. Walter Storrs Bigelow.

The Passing of Expectancy. Dora Reed Goodale.

Mona Lisa. Abbe Carter Goodloe.

Ye Romance of Casco Bay.—V. Herbert M. Sylvester.

Harvest. Meredith Nicholson.

Lost Pueblo. Verner L. Reed.

A Gray Day. Margaret White Elliott.

The Salvation of a Missionary. Edwin C. Martin.

Mr. Burbitt's Bible Class. Rev. Marvel Edwards.

The Republic of Chile. Lieut. Chas. H. Harlow, U.S.N.

Proportional Representation. Stoughton Cooley.

John Ballantyne, American. IV–VI. Helen Campbell.

FOOD, A JOURNAL OF HYGIENE AND NUTRITION.

With the February number, this bright and entertaining monthly materially changes the character of its contributions from those of a journal devoted to the popular taste, with which it began its existence and published many clever and instructive articles and hints on foods, menus, and the elegancies of modern dining and catering.

While some of its readers may regret to lose its articles which attracted so much attention to it in the first two years of its existence, its management have decided to make a strictly professional publication of it, and have arranged for the editorial charge of Frank Woodbury, A.M., M.D., Professor of Clinical Medicine in the Medico-Chirurgical College of Philadelphia.

Its contents for February comprise articles by some of the best known and most distinguished writers on medicine and dietetics:

The Prevention and Treatment of Pulmonary Consumption, by Frank Woodbury, A.M., M.D.

Diet and Disease, by John V. Shoemaker, A.M., M.D.

Infant Feeding and the Hygiene of the New-born, by Prof. Tarnier.

On the Treatment of Cholera and Non-Choleraic Diseases Attended by Intestinal Disturbance, by Hobart A. Hare, M.D.

Clinical Lecture on Cases of Dysentery and Winter Cholera, by Prof. J. M. DaCosta, M.D., LL.D.

The Deterioration of our Food Supply, by Dr. Lewis G. Janes.

Koumyss: What it is, and its Modern Preparation, by Ernst J. Lederle, Ph. B.

Some Errors of Food Investigations, by Charles E. Woodruff, M.D.

The Doctor's Easy Chair; The Doctor's Mirror and Retrospect; The Doctor's Library.

The subscription price is $2.00 yearly, and single number 20 cents. Orders may be sent to its publishers, The Clover Publishing Co., 71–73 Park Place, New York.

THE GALAXY OF MUSIC.

The Galaxy of Music for January, in its new dress of type, will hardly be known by its old friends. A publisher who will furnish six each of the best vocal and instrumental gems of the day in the beautiful and attractive shape in which they are here given to the public, for such a nominal price, deserves to have not only the patronage, but the thanks of all our musical friends. It is by far the best collection, printed in the finest style ever offered at such a bargain—ten cents. Can be had of all newsdealers or by sending stamps to its publisher, F. Trifet, Boston, Mass.

Notes and News.

Treatment of Cholera by Irrigation.—

Elmer Lee, A. M., M. D., of Chicago, reports in the Medical Record, Dec. 27, 1892, some practical experiments in the treatment of cholera by irrigation. Dr. Lee gives an extended description of his work in the hospitals at St. Petersburg during the recent cholera epidemic, where he applied the system of irrigation with success.

The plan consists in the introduction of a soft rubber tube one meter in length, and of a suitable size, to be introduced into the rectum in front of the promontory of the sacrum, into and up through the sigmoid flexure and into the descending colon. The size that has been found to pass most easily is a tube that would correspond to a No. 48 in diameter.

It is of the greatest importance that the tube should be of the proper firmness to prevent it from buckling or bending upon itself when the end, which in all cases should be rounded, comes in contact with the obstructing fold of intestine.

The effect of passing into, through and out of the large bowel two or three gallons of warm water medicated with soap, is not only to directly remove the accumulated contents of the large intestine, but, secondarily, through the sympathetic nervous action of the muscular organism of the small intestine, to almost completely carry off its liquid contents. The Doctor says that the value of this lesson has been learned by him in the treatment of various forms of entero-colitis. The plan finally adopted by him in St. Petersburg was to take the patient directly from the ambulance to the bath-room without delay, and when the clothes were removed the patient was laid on his back upon the irrigating table, with his knees drawn up and the muscles of the abdomen relaxed. Without any waste of minutes, the long tube, after being lubricated with soap, was gently pushed into the rectum as high as it could be made to go, and the stream of the previously prepared solution of warm water and soap, making a soapsuds, was allowed to run freely into the colon. When the colon was filled the pressure would force the water to seek an outlet out of the opening around the tube into a properly constructed receiving vessel. After the thorough irrigation the patient was placed in a bath of warm water, and afterwards put to bed. Dr. Lee further remarks that he has found soap consisting of oil, potash, and glycerin, when added to warm water, a disinfectant of the highest importance.

After this irrigation he recommends, as an internal treatment, peroxide of hydrogen 2 ounces diluted with 8 ounces distilled water, given in cupful doses at intervals of three hours. The object of the administration of the hydrogen dioxide *per orem* was to further cleanse and disinfect the intestinal canal, and the distilled water was added to increase the bulk.

A New Theory of Sleep.—

Rosenbaum (Thesis, Berlin, 1892; Centralbl. f. klin. Medicin, 1892, No. 49, p. 1054) defines sleep as that condition of consciousness in which the psychic and physical forces are reduced, in greater or less degree, in accordance with the individuality, below the level normal to waking, or under some circumstances are entirely suspended. This reduction of force follows as the result of preceding fatigue of the nervous system induced by the activity of the waking hours. The real essence of fatigue resides in a swelling of the nerve-cells, in the presence of an increased quantity of water in the nerve-substance. This absorption of water stands in inverse proportion to the nervous activity; the greater the quantity of water the slighter the irritability, which may disappear entirely. The absorption of water occurs in consequence of the chemical decomposition of the nervous tissues that takes place as a result of the activity. The water thus produced is expired by the lungs as vapor—a small portion in the course of the day; the larger portion, however, during the night, in the course of sleep. The absorption of water from the various organs into the venous circulation is governed by the laws of hydrodiffusion, and is dependent upon the volume and density of the blood, upon the presence of solid constituents, the velocity of the blood-stream, etc. The dissipation of water into the air is governed by the laws of gas-

eous diffusion, and is dependent upon the air-pressure and the matters contained in the water. On account of the disproportion between the absorption of water and nervous activity, those centres that have furnished the smaller proportion of work will be aroused the earlier—there thus result partial sleep and partial waking at the same time. The ideas cannot be associated—and dreaming is the result. If, on the one hand, a portion of the centres and motor nerves are so far aroused as to send out impulses and convert these into mechanical work, while, upon the other hand, the remaining centres are still so profoundly wrapt in sleep as not to be aroused by these stimuli, the condition of somnambulism results. The nutritive elements assimilated and stored up in the organism take the place of the water thrown off during sleep. The recuperation of the physical and psychic forces after sleep results from this interchange. Intelligence stands in inverse ratio to the percentage proportion of water in the brain, and it is to be measured by this standard—at least in the child. —*Medical News*, Feb. 11, 1893.

Medical Jurisprudence of Alcoholic Inebriety.—

Under this title Dr. T. D. Crother, in International Medical Magazine, February, 1893, publishes an article. He summarizes his conclusions as follows:

1. The number of inebriates which come under legal notice is steadily increasing. The methods of treatment are practically failures in every sense.

2. Alcohol is a paralyzant on body and brain, acting upon the senses first, then upon the reason, and finally causing palsy of the higher brain-centres.

3. Many forms of alcoholic injuries occur, of which *trance*, *epilepsy*, *paralysis*, *traumatism*, *insanity*, are common.

4. Heredity, training, and surroundings are active forces which lead up to alcoholic excesses.

5. The continuous use of spirits numbs and breaks up the higher brain-centres, and all persons who use alcohol in excess have lessened and impaired responsibility.

6. The natural tendency of all persons who are damaged by alcohol is to lawlessness and crime.

7. The error of regarding all persons a sane who continually poison themselves wit spirits results in an increase of crime and th production of a degenerate class. Court and juries judge of these cases from theor and not from facts.

8. Such cases should be examined by medical commission, and their conclusion should be final in the evidence.

9. Military hospitals should be built fror the license fund, and supported by the labo of inebriates sent to them for life or a perio of years.

10. All inebriates should be regarded a insane and irresponsible and should be force to go into military hospitals. They shoul be treated in the same way as cases of infec tious disease are treated.

11. The medical jurisprudence of inebriet promises more for the solution of the alco holic question than any other means.

Treatment of Aortic Aneurism by Electrolysi through Introduced Wire.—

Stewart (American Journal of the Medica Sciences, October, 1892) reports a case o large sacculated aneurism of the aorta treate by the introduction of wire and electrolysis This treatment was tried with the objec of promoting prompt formation of firm pro tecting coagula, in order to retard rupture o the thin-walled sac. The aneurism, whic had arisen from the lower part of the thoraci aorta, and subsequently had involved a por tion of the abdominal aorta, was a very larg one, and bulged backwards so as to form prominent pulsating swelling in the left lum bar region. The patient was a man, age 32. In his operative treatment of this cas the author chose a rather heavy silver wire with the idea that the presence of large sup porting spirals in the sac, occupying much o the cavity and affording a good framewor for clot, would offer a better chance of im mediate success than the use of a thinne and more pliant wire, which might underg deflection from its course in introductio through coming in contact with loose coagul already in the sac. Two and a-half feet o wire and also one end of a platinum needl were introduced into the sac, and a current after being gradually increased to a strengt of 70 milliampères, was maintained at thi

point for one hour. The wire was passed through a cannulated steel needle 2½ inches in length. The condition of both needles on withdrawal showed unquestionable clot formation about them. On the third day from the date of operation a remarkable change was noticed in the condition of the aneurism. The prominent pulsating portion in the left loin had become depressed, and transmitted pulsation could be detected in it. The whole of the lower part of the aneurism felt much firmer, and was quite without pulsation, while the extreme upper part seemed to have undergone no change.

Direct Application of Menthol to the Stomach.—

A. L. Benedict, in International Medical Magazine, speaks well of the effect of a menthol spray applied directly to the mucous membrane of the stomach in cases of atony or catarrh of that organ. The method of procedure is as follows: The patient should be directed to take no food within four hours of the application, and the last meal should be a light one. Lavage is carried out in the ordinary way, plain water or a weak alkaline solution of about the body temperature being used, and the washing being repeated until the fluid returns free from shreds of mucus. A 1- to 5-per-cent. oily solution of menthol should then be sprayed into the stomach through the tube; an ordinary nickel-tube perfume-atomizer serves the purpose perfectly well. The spray may be directed into the funnel, or the latter may be removed and the tip of the atomizer introduced into the tube. The vapor, like the fluid previously used, should have an alternate ingress and egress; by pinching the tube close around the tip of the atomizer the stomach may be fully distended, and it should then be allowed to contract upon its gaseous contents, when the vapor and even drops of water will be expelled with considerable force from the mouth of the tube. The patient almost always states that he perceives the taste of peppermint in his mouth. The vapor should be introduced into the stomach, and that organ allowed to contract upon it, six or seven times, so as to insure the remedy coming in contact with the whole internal surface of the viscus. Details of several cases in which this method was used with great advantage are given, and the author suggests that other medicinal agents, such as nitrate of silver, might be applied to the internal surface of the stomach in the same way in cases of gastric ulcer, etc.

The Johns Hopkins University Medical School.—

We learn that a generous donation of $300,000, by Miss Mary Garrett, completes the sum of half a million dollars necessary to effect the full organization of the medical faculty of this University. The policy of the trustees has been gradually to equip the departments as the money was forthcoming. The chemical laboratory, in charge of Professor Remsen, and the biological laboratory, in charge of Professor Newell Martin, were organized at the opening of the University in 1876; and the department of pathology, under Professor Welch, in 1884. Drs. Osler, Halsted, and Kelly, who are in charge of the medical, surgical, and gynæcological departments of the hospital, were appointed respectively Professors of Medicine, Surgery, and Gynæcology. There remain only the pharmacological and anatomical departments to complete the Medical School. The conditions for admission will be unusually stringent, and mark a distinct advance in medical education in America. The course will consist of a preliminary medical course (or its equivalent) of three years, prior to which the University matriculation must be passed, consisting of mathematics, Latin, Greek (or German and French), with English, history, and the elements of physics, botany, chemistry, and physiology. The subjects of the preliminary course are, in the first year, physics, chemistry, English, history, and physical geography; in the second year, chemistry, biology, and German; in the third year, biology, French, logic, ethics, and psychology. This leads to a B.A. degree. A full four years' course will be exacted.

Professor von Esmarch.—

On Jan. 9th Professor Friedrich von Esmarch, the eminent surgeon of Kiel, celebrated the completion of his seventieth year. He was born at Tönning, in the Eiderstadt District, his father being a medical practitioner. In 1849 he qualified as a Privat-

Docent, and in 1857 he was appointed Professor of Surgery in the University of Kiel. During his occupation of that charge he performed no fewer than fourteen thousand surgical operations. Besides his labors as a teacher and his professional work as a consulting surgeon, Professor von Esmarch has had a large experience in military surgery in the two Schleswig-Holstein campaigns in 1848 and 1864, the Austro-Prussian war of 1866, and the Franco-German war of 1870. In addition to all this active work, Professor von Esmarch has found time to make many and valuable contributions to surgical literature. In 1872 he married *en secondes noces* Princess Henrietta von Schleswig-Holstein-Sonderburg-Augustenburg, an aunt of the present German emperor; and in 1888 he received a patent of hereditary nobility. The orders and distinctions conferred upon him in the course of his long and distinguished career are so numerous that when he dons his uniform as a Surgeon-General, there is, as the author of a sympathetic notice puts it in the Münchener Medicinische Wochenschrift, "hardly a spot on his breast that is not covered with high and highest orders and decorations."—*Medical Record*, February, 1893.

"Cerebrine."—

The "brain matter" employed by Constantin Paul in neurasthenia, locomotor ataxia, and mental diseases, is prepared in the form of a 10-per-cent. glycerin extract as follows: Half an ounce of grey matter is taken from the brain of a freshly killed sheep, and finely divided. It is placed in three times its own weight of pure glycerin, and allowed to macerate for twenty-four hours. An equal quantity of distilled water is then added, and the mixture passed through a d'Arsonval filter under very high pressure (50 atmospheres); in this way a clear colorless fluid is obtained which contains no organized particles.

The initial dose is 15 minims, introduced subcutaneously in the flanks or in the lower dorsal region, and this is increased by 15 minims every second day until the limit is reached, 75 minims being considered the maximum. The latter dose is continued twice a week until twenty injections have been given.—*American Therapist*, February, 1893.

The Germs of Cholera, and Their Destruction.—

The germs of cholera in the soiled clothing and dejections of the sick have great vitality, and may survive a very long time, sometimes longer than a year. In a recent discussion before the Academy of Science in France, various methods for the destruction of the germs were recommended, and numerous sanitary measures were presented for the purpose of excluding cholera from European ports. It is noticeable that in many of these plans, or methods, the mode of destruction which seemed to be considered the best was the action of steam under pressure. This plan had been demonstrated theoretically by the Committee of Hygiene, and practically two years ago, during the epidemic of cholera in Spain, where steaming had been practiced on clothing, etc., before the introduction of the disease from infected districts. This is the system chiefly employed in the United States.—*Modern Med. and Bact. World*, January, 1893.

The Hygiene of the Teeth.—

All caries of the teeth begins from the outside, no such thing as internal caries having ever been demonstrated; hence if the surfaces could be kept absolutely clean, no decay could take place, however poor the texture of the teeth. This is of course impossible, but much in this direction can be attained by attention to hygienic rules. Parents often ask their dentists and medical attendants: "When ought teeth to be cleaned?" The answer assuredly is: "As soon as there are teeth." A very small toothbrush charged with some precipitated chalk flavored with an aromatic drug to make it pleasant, is perhaps the best means. —*London Lancet.*

Women Medical Students Not Wanted.—

The faculty of the Columbian University in Washington have withdrawn the privileges previously offered to women in the medical department. The reason assigned is that the presence of women as students kept men away, and they had no desire to become a female seminary. They also considered that the teaching of men and women together was demoralizing to both.

Therapeutic Brevities.

Diurnules and Diurnal Tablet Triturates.—Messrs. Parke, Davis & Co., manufacturing chemists, 43 and 44 Holborn viaduct, London, have introduced a new mode of administering toxic drugs, which removes the difficulty some practitioners may have in remembering the maximum and minimum dose of each. The recognized maximum internal daily dose of the substance is subdivided into twelve equal divisions; these subdivisions are administered in the form of small yellow granules termed diurnules, also as diurnal tablet triturates. One diurnule or tablet is given every two hours if it is desired to administer the full dose. If the full dose is not desired, the prescriber can easily regulate the quantity by giving the diurnules at longer intervals. The diurnal tablet triturates can be divided into two or four equal parts, each tablet being marked by lines. The tablet form admits of being crushed into powder or dissolved in water, so that they can be administered to children and to such patients as cannot take pills. We have received a portable case containing a dozen small bottles of various kinds of diurnules, comprising such toxic substances as aconine, arsenious acid, perchloride of mercury, etc.; twelve of these granules contain a full daily dose for an adult. The diurnal tablet triturates are small circular tablets marked in four divisions, which can be easily separated by means of a knife.—*British Medical Journal*, Feb. 18, 1893.

Ferments in Milk Juices.—A. Hansen has examined the latex of different species of plants for the presence of ferments. He finds none in the Euphorbiaceæ, in *Ficus elastica*, Scorzonera, Taraxacum, or the juice of the opium poppy. The latex of *Ficus carica* (the common fig), on the other hand, contains principles capable of effecting four fermentative changes; they peptonize albuminoids in the presence of either alkalies or acids, act like diastase on starch, and coagulate the casein of milk. Twenty to one hundred grammes of fibrin, previously caused to swell by immersion in hydrochloric acid of 0.2-per-cent. strength, are completely dissolved in ten to thirty minutes when treated at 40° with 2 to 3 cubic centimeters of this latex. The products of this digestion are the same as with pepsin; yet the two ferments are not identical, since the Ficus latex peptonizes in presence of alkalies as well as acids, although more slowly. Probably there are two peptic ferments present, one acting in acid, the other in alkaline, solutions. On the Continent this juice is used to destroy warts, and in Pliny's time it was thought to cure the bites of venomous animals. It is found in the fruit before it arrives at maturity, and the purgative action ascribed to the fruit is probably due to its peptonizing powers. The juice of pineapple has the same effect (see MEDICAL AGE, Feb. 25, 1892, page 118), from which it would appear that a combinatiou of these as dessert or as a prepared dish for the table should be one of the best of digestives.—*Quarterly Therapeutic Review*, January, 1893.

Treatment of Hay Fever.—Dr. A. B. Welford, in a paper on this subject (Canadian Practitioner), offers a suggestion as to the treatment of the exacerbations by a powder used as a snuff, and consisting of:

℞ Menthol, gr. iij.
Morphiæ sulphat., gr. ss.
Cocaini, gr. j.
Bismuth. carb., gr. vij.
M. Sig.: Ft. pulv.

This he has used for two or more years for the very common affection known as cold in the head, with almost constant and prompt relief.

Dr. H. Rexa advocates the use of terpine hydrate. In small doses (from 2 to 5 grains) it liquefies and increases the secretion of the bronchial mucous membrane, and thus facilitates expectoration. In large quantities, however (in 15- to 20-grain doses), it reduces the secretion and renders expectoration less, until it stops altogether. In cases of bronchial dyspnœa, in consequence of the plugging of the bronchi by too copious secretion, it is of the greatest value. In hay and bronchial asthma it acts like a charm; *i.e.*, by giving it to those who are subject to the disease, it arrests the outbreak.—*The Hospital Gazette* (*Quarterly Therapeutic Review*, January, 1893).

Stigmata Maidis in Cystitis.—According to Dr. Vauthier (Arch. Med. Belges, August, 1880), its activity depends on Maizenic acid. It may be given freely in infusion (2 ounces of fresh corn-silk to a pint of boiling water); but the most eligible, and, if a reliable preparation is desired, the most satisfactory in my experience, is the fluid extract, which can be given in doses of from ½ to 2 fluidrachms; if frequently administered, say every two hours, the minimum dose will be found sufficient in nearly all cases.

Prof. Dennée, of Bordeaux, obtained most favorable results in vesical catarrh, the

remedy appearing to possess an elective action on the mucous membrane of the bladder. These statements are corroborated by a number of other eminent practitioners. The remedy produces no disturbance of the digestive system. The tolerance of the drug is complete and absolute, while in chronic cases its administration may be continued for three to six months without inconvenience. A number of cases are reported of cystitis, dysuria and retention of urine of many years' duration, requiring catheterization, in which, after all the ordinary means, including washing out of the bladder, had been tried and failed, stigmata of maize was used, and produced prompt and permanent relief. Its most beneficial results are obtained in acute, irritated, and inflammatory conditions. It has also a decided influence in the acute stage of gonorrhœa.—Dr. E. Stuver, in the *American Therapist*.

Scorpion-Sting Remedies.—Ten cases were treated with ipecacuanha poultices, as textbooks recommend, but only with transient benefit. In two cases chloroform alone was used and gave instant relief, but swelling remained in this instance likewise. In five cases hydrate of chloral pure and simple was rubbed into the part. It answered well, relieving pain instantly, and with this remedy there was no subsequent swelling. The action of chloral was, moreover, less evanescent than that of chloroform. In order to use it in a more convenient and more rapidly absorbable form, it was liquefied with the addition of camphor (three parts of chloral and one of camphor), and to render its action still more rapid the part was punctured with a pin or needle before its application. Menthol-camphor, and butyl-chloral-camphor, were also found efficacious.—R. P. Banerjie, in *The Lancet*, Oct. 1, 1892 (*Quarterly Therapeutic Review*, January, 1893).

Trional, under quite recent clinical tests, is found to have a special value in uncomplicated agrypnia, or wakefulness with a certain amount of excitement. In these cases it is said to have acted promptly and effectively in doses of 1 to 2 gramnes. Trional is useful also in convalescence from the abuse of cocaine and morphine. Some of the reports state that doses of 2 grammes would usually procure for these patients a sleep of seven to nine hours duration. According to a recent report of Boettiger, dementia with hallucinations was very favorably influenced by trional. The same writer reports thirty-three cases of insomnia, with physical disturbances, in the insane. These were primary or secondary, or were accompanied by moderate delirium or motor restlessness. Doses of 1 to 2 grammes of trional promptly induced a sleep of six to ten hours. The full report of the cases referred to was published in the Berl. Klin. Woch., No. 42, 1892.

Sedative and Hypnotic Action of Duboisine.—Belmondo (Riv. Sper. di Fren. e di Med. leg., vol. xviii) publishes his experience of 167 injections of duboisine in thirty-two patients. As a sedative in all psychical or motor disturbances it resembles hyoscine; and as a hypnotic it acts better than chloral in many cases. In acute insanity, especially acute mania, it acts as a psychical coördinator, and appears to exert a powerful influence on the course of the disease. The doses used were ½ to 1½ milligrammes; larger doses are unnecessary, and cause loss of appetite and vomiting. Belmondo believes, however, that the powerful effect of such small doses is in a measure due to the susceptibility of the southern race, and that therefore larger doses may be necessary in other countries.—*British Medical Journal*, Jan. 28, 1893.

Salol Gargle.—Seifert (Centralb. f. Klin Med.) confirms Georgi's favorable report. He used salol as a wash or gargle, in ulceration of the tongue, stomatitis, angina, and diphtheria, first dissolving six parts of salol in one hundred of spirit, and then adding a dessertspoonful of this solution to a glass of warm water. Seifert also used salol as a powder for insufflation, but he finds it less beneficial than iodol, because, though antiseptic and non-irritating, it does not adhere sufficiently well to mucous membranes and ulcerated surfaces.—*Quarterly Therapeutic Review*, January, 1893.

A Digestive Ferment has been isolated from the milk juice of the Brazilian white-fig tree (*Urostigma dolarium*) by Peckolt. The milk juice of this tree is of a creamy consistency, has an almond-like flavor, and readily dissolves fibrin and coagulated egg albumin. In addition to this ferment, the juice contains caoutchouc and a principle named dolariin, which, it is claimed, has tænicide properties.—*New York Medical Times*, February, 1893.

Hydrastinine.—According to Dr. Faber hydrastinine when given during labor, though it sets up uterine contractions, does not expedite the expulsion of the child, but rather

etards it. The pains, which are of a character similar to those produced by ergot, are sometimes very protracted, lasting in one case for as much as a quarter of an hour. In metrorrhagia, whether due to endometritis, myoma, or tumors in the uterine appendages, hydrastinine has proved valuable, and is best administered hypodermatically, the dose being about five centigrammes.—*The Lancet.*

A New Antiseptic Mixture.—Dr. Cavazzini recommends for dressings the following antiseptic powder:

Iodoform, 55 parts.
Salicylic acid, } ää 20 parts.
Bismuth subnitrate, }
Camphor, 5 parts.

The powder is of a yellow color and free from disagreeable odor. Torpid and fungoid granulations are favorably influenced and suppuration is greatly diminished.—*American Journal of Pharmacy* (*Quarterly Therapeutic Review*, January, 1893).

Pancreatic Juice in Diabetes.—Dr. R. Mansell-Jones, Brighton, writes to the British Medical Journal: As the juice of the thyroid gland appears to be almost a specific in myxœdema, I would suggest that pancreatic juice, administered either immediately before or after meals, should be given a fair trial in diabetes, as this disease in most cases appears to be due to disease or disordered function of this gland.—*Quarterly Therapeutic Review*, January, 1893.

Hiccough.—Dr. J. W. Allen (London, N. Y.) recommends:

℞ Olei succini ver., ʒ ss.
Liquor potassæ, ʒ j.
Tinct. camphor comp., ʒ iv.
Mist. acaciæ, ʒ ij.
Aq. menthæ pip., ad ʒ vj.

Sig.: One-sixth every two hours.

Two doses usually succeed.—*Quarterly Therapeutic Review*, January, 1893.

Kola in Chronic Diarrhœa of Infants.—Dr. Combemale has found the following (Sem. Med.) of value in chronic diarrhœa of children:

℞ Ext. kola, gr. xv.
Syrup quince, ʒ ij.

M. Sig.: One teaspoonful every hour until the whole is taken.

—*Medical Standard*, February, 1893.

Medical Progress.

TREATMENT OF DISEASES OF THE CLIMACTERIC.*—The numerous complaints of women at the age of the climacteric, that period when sexual activity is extinguished (between 46 and 50 years of age), and the manifold modifications which occur throughout the organism at the time of the menopause, may be referred to two factors: disturbances of circulation, attended with engorgement and congestion in the various organs; subsequently, modifications of the nervous system, manifested by symptoms of irritation and hyperæsthesia. The familiar "heat-flushings," the tendency to nasal and other hæmorrhages, the augmented transpiration of the skin, the paroxysmic tachycardia, attacks of dizziness, blood-engorgement in the abdominal organs, hæmorrhoids, the states of mental and physical restiveness, giddiness, confusion, disturbances of perception, etc., as also the many and various morbid conditions of the sexual organs which accompany irregularity and extinction of the menstrual function, have fittingly caused this phase of woman's life to be termed the "critical years," and since time immemorial medicine has strenuously sought for remedies which should afford protection against the dangers of this period.

The withdrawal of blood was formerly popular; bleeding and cupping were recommended as preventive measures—a form of therapy which quite recently found an advocate in Tilt. Busch, however, objects to the bleedings during the climacteric, which were so much in vogue during his day, and says: "Even if it be important to anticipate the dangers of plethora by a seasonable bleeding of an aging woman, we should nevertheless remember that only palliative relief is thus afforded, and we must seek to improve the general condition by prescribing a proper diet and by promoting other natural secretions." It is true that a general withdrawal of blood is often capable of mitigating the symptoms of blood-stasis and congestion, but this momentary gain is materially detracted from by the loss which follows reduction of the blood's volume, the promotion of general anæmia, and the debilitation of the nervous system ensuing upon frequent repetition of blood-depletion.

On the other hand, I would emphasize the high preventive and therapeutic value of the purgatives, which have likewise long been

*By Prof. E. Heinrich Kisch. Translated for the MEDICAL AGE from the Therap. Monatshefte, February, 1893.

recommended for women in the menopause. There are many considerations which indicate the systematic application of gentle purgative remedies during the climacteric. The laxative remedies are preëminently efficacious in overcoming the congestive hyperæmia and collateral engorgements which are manifested through the group of symptoms evidencing abdominal plethora. Through the augmented intestinal secretion, a part of the superabundant blood is utilized; and through the effected transudation and diminution of lateral pressure, circulation is facilitated in the abdominal vessels. Thus we may combat a whole series of hyperæmias caused by chronic blood-stasis: hyperæmia of the gastric and intestinal mucous membrane, hepatic hyperæmia, pulmonary hyperæmia, as well as meningeal hyperæmia, etc. The employment of purgatives is also required by the sexual complaints which often occur during the climacteric age—first, the climacteric menorrhagias and atypic hæmorrhages caused by loosening and relaxation of the uterine tissue; then, by the acute and chronic inflammatory conditions of the pelvic organs, hyperplasia of the uterine muscular and connective tissue, as also the connective-tissue hyperplasia of the ovaries, catarrh of the uterine mucous membrane, the transpositions of the female genitals; the purgatives exerting a favorable action upon the diseased uterus and its adnexes through their revulsive properties. Finally, the use of laxatives is rendered necessary by chronic constipation, one of the most frequent features of the menopause, and by the very troublesome chronic meteorism connected therewith.

Stress should be placed upon the important rule that drastic purgatives are not to be used in order to incite systematically the intestinal activity—only such remedies as exert a permanently favorable action upon defecation, even though it be slight at the outset. Choose tamarind, manna, prune pulp, rhubarb, and the mild laxative salts; avoiding altogether aloes, colocynth, senna, jalap, and other drastic remedies, or using them only once when the milder agents prove delusive in some case of obstinate constipation. Clysters and intestinal irrigations with water at 72°–77 F. are to be recommended in connection with the foregoing; also moist abdominal bandages. Great benefit may be obtained from drinking waters containing Glauber's and common salt. The cold Glauber's-salt waters of Marienbad in Bohemia, and Garasp in Switzerland, should be preferred by climacteric women showing excess of adipose; in cases where symptoms of cerebral hyperæmia predominate; in neuralgias, as also in tachycardiac paroxysms. The thermal springs of Carlsbad are specially indicated during the climax when the symptoms of perturbed gall-formation come into the foreground, and when—as is frequently the case—there is excess of uric acid. A less energetic but yet beneficial action is obtained from the cold, heavily charged salt waters of Kissingen and Homburg. The bitter waters of Friedrichshall, Püllna, Saidschütz, and Budapest, are of service in domestic use and where it is required, as in cases of severe congestion to the brain, to cause a vigorous and prompt deviation toward the intestinal canal.

Tepid baths of 86°–88° F. constitute an important hygienic and therapeutic resource in the diseases of the menopause. They promote the skin function—so very important during the climacteric period—and reduce the tendency to the development of acne, eczema, and pruritus. Moreover, such baths act as sedatives upon the nervous system; of the very common cutaneous hyperæsthesia and neuralgias, and reflexively upon the visceral neuralgias and psychic hyperæsthesias. This purpose is even better fulfilled by the aërato-thermal baths, where the benefit is reinforced by the effect of mountain air, as at Gastein, Johannisbad, Landeck, Schlaugenbad, Wildbad. Baths in water charged with carbonic acid, ferruginous and alkaline baths, I regard as contra-indicated on account of their stimulating action on the general circulation of the blood, as well as, particularly, the congestion which they determine to the pelvic organs during the climacteric period; the same injunction applies to cold sea-baths and to radical hydratic measures.

Special attention should be given to the uterine hæmorrhages of the climacteric which render necessary the physician's energetic intervention. These at times violent hæmorrhages—recurring often regularly every four weeks, but oftener atypically at intervals of fourteen days to three weeks—may readily produce anæmic and marasmic conditions which serve as an excellent soil for the development of malignant neoplasms. Whether these latter are not present at the very outset—on this point a differentiating diagnosis can be obtained only by a careful examination. If the hæmorrhage is not very profuse, relief may be obtained by complete rest, the local application of cold (the latter in the form of cold water injections), icebags applied to the lower abdomen, and the application of my vaginal refrigerator—a metal instrument which is introduced into the vagina, and through which cold water flows

thout moistening the genitals. If the application of cold alone does not suffice to anch the bleeding, make injections of cold ater and liq. ferr. sesquichlorat. The following solution may be kept on hand, adding -4 tablespoonfuls to 1 or 1½ liters of cold ater: Liq. ferr. sesquichlor, 15.0; aq. dest., 0.0. But if the bleeding persists after the peated injection of this liquid, tamponade the vagina—preferably with strips of doform-gauze—must be resorted to. This mpon is permitted to remain in place sev- al hours, is then cautiously removed, and applied if the bleeding still continues. s an internal agent in climacteric hæmorhage, I prefer Denzel's hæmostatic tincture, hich contains 100 milligrammes ergot in ne gramme of tincture, administering 20 rops several times daily (every two hours, lso every hour). As long as the bleedg persists, the patient must remain in recumbent position, perfectly quiet. The othing must be light, the temperature f the room cool. Regular defecation must e produced; stimulating foods and beverges and excessive quantities of either food r drink must be rigidly excluded.

One of the most troublesome complaints f the climacterium is the not infrequent ruritus of the vulva and vagina, which gives se to persistent and painful sensations hich may assume such intensity as to render ne woman psychically morbid and even eary of life. I have satisfied myself that is *pruritus at times constitutes the first symm of a developing carcinoma of the parts*, and, herefore, consider it essential in all cases here climacteric women complain of such yperæsthesia of the nerves of sensation of he vagina and external genitals that a careul search for carcinoma be made. All the xternal remedies often prove futile, against his pruritis. The following procedure has roven most efficacious: I have the woman ake daily before going to bed (because the omplaint is most pronounced on retiring) a ukewarm bath (88° F.), adding one kilogramme of wheat-bran. (The bran is put in a linen bag which is immersed in the bath nd is kept in the water until the bathing is inished—twenty minutes.) After the bath ne vulva and adjacent parts receive an bundant application of the following powder:

Acid. salicyl., 1.0.	
Amyl oryz.,	ää 50.0
Talc Venet. pulv.,	

M.

This powder is reapplied several times daily.

The most important factor in the prevention and mitigation of climacteric complaints is the strict regulation of the diet. With respect to the determination of the latter, we may distinguish two principal classes of women at this period. The first type is represented by women of the sanguine temperament, of round, full outlines, specially disposed to the excessive formation of adipose at this period. To the other group belong women of very nervous temperament, of sensitive disposition, and slender figure. With the plump women a mild, reducing regimen (not too nutritious food, avoidance of fat-forming nourishment, vigorous bodily exercise) will be indicated; whereas with women of the "nervous type" a very nutritious, unstimulating diet, rich in amylaceous elements, rigorous abstention from acids as well as stimulating beverages, and, finally, a certain tranquillity of body and mind, are required. Amongst the irritating factors which, in general, should be studiously avoided during the menopause, is excessive sexual intercourse; coitus should be as infrequent as possible, in view of the general prevalence, at this time of life, of hyperæmia of the sexual organs. Similarly, climacteric women must guard against everything which may suddenly suppress the menstrual flow, such as wetting the body (especially the feet), washing the genitals with cold water, etc., inasmuch as a sudden cessation of the menses may give rise to dangerous after-symptoms. The special importance of the skin's function during the menopause renders necessary a certain care in the choice of clothing as a sufficient protection against the contraction of colds. The psychic elements of treatment are not to be neglected, since most women have a great dread of the dangers of the critical period, and, on the other hand, the consciousness of losing the attributes of womanhood depresses and darkens the spirits. Here the physician must exert his influence as a consoler and counselor.

A Case of Scirrhus Treated by Internal Medication.—I am led to report this case, in view of the very uncertain results obtained by the most careful operators in the treatment of cancerous diseases by the use of the knife. The happy results obtained by me were unexpected, and I trust that this report may lead others to investigate the value of the treatment here given, if happily it may be proven that we have a remedy that, if it does not cure, will at least palliate the horrors of cancer.

At some future day, when I shall have carried my investigations further, I shall make a more extended comment on the sub-

ject of cancers. For the present I give a history of the case without comment.

Mrs. X——, widow, multipara, age 68, consulted me in March, 1891, in reference to a tumor in the right mamma. She gave the following history: Some six years ago she was struck on the right breast by the back of a rocking-chair. After a few days, the pain passing away, no attention was paid to it. Some time afterward, on reaching up to light the gas, she felt a sharp pain at the point where she had been struck. Upon examination she found a hard place. This continued to grow in size and darken in color, with occasional sharp, shooting pains, till she became alarmed and consulted me.

The family history presented by this case is remarkably good, there being no history of cancer, tuberculosis, or specific disease in her family or her husband's family, either direct or collateral.

Upon examination I found a well preserved woman of good weight, with a well marked carcinomatous cachexia; the right mamma rather small—in it a nodular tumor about the size of a goose egg, with its long axis at an angle of forty-five degrees from the vertical; on the lower margin a blue-black spot the size of a silver dollar. Near the upper end of the tumor was another black spot. The color gradually faded from these spots over the whole mamma. The skin was firmly attached to the tumor at these spots, and was hard and smooth, looking more like polished marble than human skin. The nipple was retracted—in fact, looked as if it was turned wrong side out. The tumor was firmly adherent to the chest wall, any attempt to lift it causing pain.

Strange to relate, a most careful examination failed to disclose any enlarged lymphatics. My diagnosis was tuberous scirrhus.

In view of the age of the patient and the almost absolute certainty of a return after the operation, I advised against surgical interference, the best authorities agreeing that in elderly persons the operation rarely prolongs life but a few months. After hearing all the facts in the case, the patient and her friends accepted my advice and decided not to have an operation. They naturally wanted to know if something could not be done without the use of the knife, which promised so little.

Having had most excellent results from the use of syrup trifolium compound (Parke, Davis & Co.) as an alterative, I determined to put her on this preparation, that her system might be in the best possible condition before the breakdown came, when the tumor would ulcerate. This I ordered to be taken in teaspoonful doses three times a day. I also directed a pill of hydrastin ¼ grain and podophyllin $\frac{1}{50}$ grain to keep the bowels open as needed.

The whalebones having been taken from the right side of the corset, the breast was dressed daily with this ointment spread on cloth:

℞ Sebi ovis, } aa ℥ ij.
Ol. oliviæ, }
Ceres flava, ℥ ss.
Zinc. oxid., ℥ iij.
Ext. eucalyptus glob., ℥ j.
Acid. carbolic., gr. C.

M. Fiat ung't. Sig.: Grant's oxid. zinc ointment (comp.).

This ointment is a great favorite with [illegible] but in this case was used to prevent friction as the friction of the clothing produced pain. As the mamma was to be carried in a sling she used an old silk handkerchief on account of its softness. The patient was directed not to use her right arm more than absolutely necessary, to do no work or sewing, take a great deal of open-air exercise, and keep cheerful company.

In ordering this line of treatment I assured the family it was not expected that it would effect a cure, but merely to put her in the best possible condition for the inevitable, and to delay the breaking down as long as possible.

This treatment was faithfully carried out till September, 1891, when I again saw the case. The cachexia was gone. Her complexion was so clear as to cause remarks by her friends. Upon examination I found to my surprise that the skin was no longer hard and shiny, and the discoloration had almost entirely disappeared; only the lower place that had been black was discolored, and that only a pale blue. The tumor was greatly reduced in size and no longer adherent to the chest wall. The nipple was not so retracted.

Early in November, 1891, I again saw the patient. The general appearance showed a progressive improvement, but in the place where had been the centre of the original large dark spot there was an opening the size of a crow-quill, discharging a thin ichorous fluid, I suppose as much as 2 fluidounces in twenty-four hours. The nipple did not project as much as normal.

I ordered the same treatment continued with the addition that the cavity was to be washed out with hydrogen peroxide (Merchand), one part to three of boiled water, using a small syringe, the injections at each sitting to be repeated so long as the return

ig fluid was frothy, after which there was to
t injected a syringeful of the following:

℞ Methyl violet (Merke), grs. v.
Aquæ, ℥ ij.

M. Sig.: 5 to 10 drops in ℥ j of boiled water.

he breast to be dressed night and morning.
The discharge grew less and less each day,
ll at the end of six weeks I had the satis-
ction of learning that the opening was
aled. The general condition continued to
prove till February of 1892, when there
me another opening about the same size
d place, discharging the same thin ichor-
s fluid, attended by slight hæmorrhage.
n this occasion the discharge ceased, and
e opening healed entirely in three weeks,
der the same treatment.

I examined the patient carefully a few
eks ago, and found no discoloration of the
in, the tumor not half so large as when I
st saw it. The breast is larger, and can be
oved with little or no pain; nipple normal,
d rarely in pain; in short, the patient is in
exceptionally good physical condition for
person of her age.

I am free to say that I think it possible
e breast may open again; but, having suc-
eded in healing it twice and made progress
reducing the tumor and improving the
ysical condition of my patient, I do not
ok to the opening with any apprehension.

What the final outcome of the case may
, the future only can reveal; but at this
oment she is certainly in a more favorable
ndition than she was fifteen months ago.

In conclusion, I would say that the utmost
re was used in this case that there should
perfect asepsis.—T. P. Grant, M.D., in
merican Practitioner and News, Jan. 28,
93.

THE NEW TREATMENT OF CANCER.—On
veral occasions we have referred to the in-
stigations undertaken by Professor Adam-
ewicz, who, undeterred by the many failures
others, has set himself the task of discov-
ing a cure for cancer. These experiments
ere based upon the assumption of the para-
tic origin of cancer, and the results have
cently been published by the author in an
teresting monograph. Although unable to
etect a specific cancer microbe, Adamkie-
icz claims that his experiments on animals
ove the infectious and poisonous character
cancerous tissues. He implanted portions
cancer substance, immediately after exci-
on from the living body, into the different
ssues of rabbits, and found that the en-
rafted fragments of the growth were fre-
uently absorbed by the subcutaneous tissue and peritoneum, giving rise to suppuration in the former and inflammation in the latter structure—conditions never observed when other tissues were transplanted under aseptic precautions. A portion of fresh viable cancer tissue implanted into a rabbit's brain caused death after a period varying from a few hours to two or three days. No other kind of living pathological tissue transplanted immediately after excision, compared with that of cancer in rapidity and intensity of effect. Portions of implanted adenoma, sarcoma, or syphilitic infiltration, either remained indifferent or united with the brain tissue, and this same condition was observed when the tissues at the periphery of a cancerous growth were transplanted. The brain at the site of the cancerous implantation exhibited no such reaction as is produced by the action of microbes, and no cultures could be obtained by inoculation of media with the implanted cancerous tissue. It is, therefore, assumed by the author that the virus of cancer is an alkaloid of microbial origin, but not the microbe itself, and his experiments seem to bear out this point. By rubbing cancer substance with sterilized water a filtrate was obtained which possessed marked poisonous properties, and when injected into the brain of a rabbit caused death within twenty-four hours. If the quantity injected was large, no lesions could be discovered in the brain. Injections of watery extract of sarcoma, Koch's lymph, etc., did not have this effect. Injected into the skin, a slight quantity of cancer extract produced no reaction, although an equal amount thrown into the jugular vein rapidly caused death. In Adamkiewicz's opinion, these observations are conclusive of the existence of an alexine in fresh cancerous tissue to which he gives the name of cancroin. In fact, he goes so far as to regard the rapidly fatal result following the injection of cancer extract into the brain as a means of diagnosis, serving to distinguish cancer from all other neoplasms which resemble it. The existence of a cancer virus he considers proof positive of the origin of carcinoma from a microbe which does not thrive in ordinary culture media, but finds in the brain a suitable nidus of growth. Microscopical examination of brain tissue excised at the site of the cancerous implantation, revealed a number of peculiar foci, especially numerous over the convolutions adjoining the fissures. These lesions exhibited a marked tendency to degeneration in the centre, while spreading at the periphery. They consisted for the most part of small round cells not distinguishable from leucocytes, and of young cancer cells. The can-

cer foci appeared soon after implantation, and rapidly destroyed the nervous structures. That they were derived from implanted cancerous tissue, is shown by the fact that the latter showed a number of defects, evidently due to the outwandering of cancer cells, the contents of some of the alveoli and septal spaces having completely disappeared.

Now comes the startling part of Adamkiewicz's observations, which if accepted would upset all our views of the disease. He regards the cancer cells as independent living organisms and as the parasites of cancer, terming them sarcolytes, a special form of cocci. According to this theory, cancroin is the metabolic product of these organisms, and hence, in accordance with the teachings of Pasteur, Koch, and others, should exert a destructive effect upon the microbe, on the same principle as Pasteur's protective inoculations in rabies. In the further course of his experiments Adamkiewicz found that certaid alkaloids extracted from the tissues of cadavers shortly after death exhibited poisonous properties resembling in kind and degree those of cancroin. Among these cadaveric poisons neurine was found to be practically identical, both as regards chemical composition and physiological action, with cancroin. Therefore, to determine clinically whether neurine might not prove a substitute for cancroin, he employed it in a case of cancer of the lower lip by the method of subcutaneous injection, and found that it exerted specific curative effects, both upon the growth and its metastases. The neurine is employed for the injections in a 25-percent. aqueous solution neutralized with citric acid, with addition of carbolic acid, and diluted with double its volume of water. The remedy was found to exert both symptomatic and specific effects; the former being sedative, analgesic, and disinfectant; the latter consisting in a destruction of the cancerous tissue by a process of absorption, inflammation, and necrosis.

The successful results thus far achieved by this method would seem to argue in favor of its utility, and, at any rate, render it worthy of further experimentation. It has been objected by Prof. Kaposi and others who have had an opportunity to observe the patients treated by Adamkiewicz, that the action of cancroin is simply that of a local irritant, similar to that of the caustics employed in the treatment of epithelioma; but in view of the fact that in most of the cases the injections were made at a distance from the growth, this theory will not serve to explain whatever virtues are possessed by the new cure of cancer. In the twenty-five cases of carcinoma in which injections of neurine (c as the author also terms it, cancroin) we resorted to, the results certainly appear e cellent when viewed from a clinical stan point. Whether a permanent cure, howev can be effected, time alone will show.—*Inte national Journal of Surgery*, February, 18

Diurnules (Parke, Davis & Co., Ne York).—Recognizing the inconvenien which the physician often meets with wh he wishes to prescribe ordinary minimum maximum doses of such bodies as the alk loids, glucosides, and similar principles, t above firm of manufacturing chemists su divide the maximum full daily dose of t substance into twelve small equal doses. the shape of granules the medicaments th subdivided are designated, not inaptly, "d urnules," which are distinguished from pa vules, pink granules, and regular whi granules by a yellow-colored coating. Th prescriber has therefore but to rememb that twelve diurnules represent the full dai adult dose of the different medicaments exhibited in that shape. The condition the patient, of course, will lead him to va the dose from one diurnule every two hou to one every three, four, or six hours, in a cordance with the requirements. We ha recently received for inspection and exam nation a pocket-case, elegantly finished morocco, containing in the form of diurnul twelve typical substances. Notwithstandi the minute quantity of medicament which contained in many of the diurnules, we ha not failed to isolate and recognize the pri ciple in any single example, although o diurnule only was operated upon for th purpose. This bears testimony both to t reliability of the preparations and to t delicacy of chemical tests. In the case the atropine sulphate diurnule, for instance twelve of which contain $\frac{1}{30}$ grain of the s phate,—one diurnule ($=\frac{1}{360}$ grain) respond distinctly on proper treatment to the te known as Vidali's, which depends upon t production of a violet color when the e tracted alkaloid is evaporated with nitr acid and afterwards moistened with alcoho potash. A single diurnule of arsenious ac again, containing only $\frac{1}{40}$ grain, yielded the characteristic reactions of arsenic. T aconitine diurnule, containing only $\frac{1}{600}$ gra of the alkaloid base, gave a residue wh suitably treated which produced the peculi numbing sensation upon the tongue. Sim larly, sufficient alkaloid (quantities varyi from $\frac{1}{4}$ to $\frac{1}{400}$ grain) was contained in t diurnules of morphine, gelsemine, strychni

ıysostigmine, and other bodies to admit of ıeir recognition by chemical means. Di-rnules are obviously models of pharmaceu-ical elegance and efficiency, and they serve dmirably to illustrate the assistance which harmaceutical skill affords the physician in :taining accuracy of dosage and ease of ad-inistration.—*The Lancet*, Feb. 18, 1893.

Ethereal Antiseptic Soap.—The Ohio)ental Journal, edited by George Watt, M.)., D.D.S., and L. P. Bethel, M.D., D.D.S., ublishes the following article in the Febru-ry, 1893, issue, concerning the merits of a ecently introduced soap which is likely to ecome generally used. Its use has been xtended to scabies and other parasitic dis-ases with successful results.

"For some time it has been a mooted uestion whether absolute sterility of the ands of dentists is necessary before waiting pon a patient. That is, in the general run f practice. It has been maintained by some ıat a good scrubbing with plenty of soap nd water is sufficient; that this will wash way all micro-organisms that find lodgment n the hands from the oral fluids of a previ-us patient, so that there is little liability of ıfecting the patient following. Others say isinfectants or germicides should be used in onnection with soap and water. Dr. W. D. filler, in the last issue of the Cosmos, in his rticle on 'Asepsis and Antisepsis in Prac-ce,' says:

'It is reasoned that inasmuch as the human ıouth, even when well cared for, contains normous numbers of micro-organisms, the ıtroduction of a comparatively insignificant umber on the fingers would probably result ı no difference whatever in the general con-ition of the mouth. Furthermore, the ngers of a dentist do not come into contact ıith tissues which are very susceptible to ıfectious agents; consequently hands that ould be fatal to the success of a surgical peration may be introduced into the mouth ithout any ill results whatever.' And he urther adds: 'These conclusions should be ccepted only with considerable restrictions, nd only with the understanding that the ands do not carry any specific germs, and lo not introduce into the mouth any patho-enic micro-organisms not already there.'

Where there is the least suspicion of spe-ific or pathogenic micro-organisms, it is a uty a dentist owes himself as well as his pa-ients to as thoroughly sterilize his hands as ossible after the dismissal of such a sub-ect.

As a cleanser Dr. Miller has adopted the use of lysol in a 1- to 4 per-cent. solution, stating that the odor left on the hands is not disagreeable to patients, etc. We made use of the antiseptic, more or less, for nearly a year, but found the odor remaining on the hands very disagreeable to, at least, our own sense of smell. For about two months we have been using a liquid preparation known as Johnston's Ethereal Antiseptic Soap. It is superior as a cleanser to lysol, and no odor remains after rinsing the hands. After its use the hands, also, have a soft, velvety feeling to them. Unlike other soaps, bichloride-of-mercury solution can be added, if desired, without precipitation, but it is claimed that the preparation itself is a good antiseptic and it has been put on the market principally for surgeon's use."

The Simple, Septic, Traumatic, and Specific Forms of Cervicitis, and their Treatment.—*Simple cervicitis* arises alone from simple causes. It never originates from infection of any kind. It could exist for an indefinite period without infecting surrounding structures. For many years the author, in the treatment of this affection, has addressed his remedies to the interior of the cervical canal alone, whether he used nitrate of silver, sulphate of copper, carbolic acid, or iodine. *Septic cervicitis* arises always from septic infection, for the pelvic structures are connected by lymphatic communication. Contact with the os of portions of putrescent placenta, membranes, coagula, or septic discharges from diseased uteri, are the common causes. Antiseptic measures alone can counteract septic infection and inflammation, whether in the form of septicæmic fever or local inflammatory action. All other agencies are simply palliative or adjuvant in character. *Traumatic cervicitis* is simply inflammation and congestion of the cervix from wounds inflicted on that body either during labor, abortion, or from the use of dilating instruments. The author treats this form of cervicitis by means of a solution of nitrate of silver, varying in strength from a scruple to half a drachm, applied in the canal and over the entire cervix. He finds that most of his cases of open and all cases of concealed wounds heal by this method. *Specific cervicitis* may arise either from gonorrhœal or syphilitic infection. In the early stages he resorts to douches containing peroxide of hydrogen in the proportion of one part to three-fourths of boiled water, and also permanganate of potash one grain to the ounce of water.—Abstract of paper by Dr. Bedford Brown, of Alexandria, Va. (*American Journal of Obstetrics*, February, 1893).

THYMOL AS AN ANTHELMINTIC. — The vermifuge properties of thymol have anew been lauded by Dr. F. M. Sandwith (Sem. Méd.), of Cairo. He writes that for about two years he has used thymol as the one efficient remedy for expelling anchylostoma from more than two hundred patients. Unlike other vermifuges, it seems to have a special action upon this worm; but he has always found that it was necessary to administer the drug two, three, or more times. His usual habit is to give it once a week until upon two consecutive occasions no worms are found in the stools after its administration. During the intervals the patient is dosed with iron to try to counteract his great anæmia. The author originally gave 90 grains (6 grammes) of thymol in six wafers within six hours; but he has now reduced the amount to 60 grains (4 grammes) in two doses, accompanied by brandy.

Even with this modified quantity anæmic patients are seriously collapsed for about four hours; the temperature falls about 2° F. (1.1 C.), and the pulse and respirations become correspondingly less frequent. This shows that thymol must not be given in large doses without great care.

Like Dr. Sonsino, Dr. Sandwith finds that any coexisting ascarides or oxyurides are brought away by thymol, though not more satisfactorily than by the usual santonin and enemata. So far, thymol has not yielded good results on the few tænia-mediocanellata patients on whom he has tried it. It seems irrational to suppose that it could have any beneficial action on blood worms, such as filaria hominis. Dr. Sandwith has tried it, however, on several chronic cases of distoma hæmatobium, but without any effect. To these it was given in doses of 4 grains (25 centigrammes), three times a day for several weeks.—*Merck's Bulletin*, February, 1893.

COMPOSITION OF SYRUP OF FIGS.—Because the California Fig Syrup Company thought best to name their laxative compound the "Syrup of Figs," it does not follow that the active principle of the preparation is made from the fig. Instead of this being the case, they state freely to the profession that the laxative properties of the syrup are obtained from senna. Hare states in his new work on Therapeutics that both Rutherford and Vignal assert that senna acts very materially in increasing the flow of bile. Hess says that the drug acts directly as a stimulant upon the mucous membrane, and so produces a local peristalsis as it is moved along. Hare recommends it especially in the treatment o the constipation of pregnancy. As an in gredient in the compound liquorice powde it is one of the oldest and best known drug Recognizing the sterling worth of this dru when employed in laxative doses, the Cali fornia Fig Syrup Company has so combine it with other agents that it is both pleasan and effective. It might be called a famil laxative, useful in all those cases where freer action of the bowels is desired. Th physician is often puzzled to know exactl what to prescribe when the only remedy in dicated is something to increase peristalti action. The therapeutics of senna warrant its recognition at once, while the palatable ness of the preparation points to Fig Syru as the best medium by which this drug ca be administered.

It is interesting to note in this connectio that the California Fig Syrup Co. has ju received a decision from the United State Court of Appeals confirming their right t the exclusive use of the name "Syrup o Figs" or "Fig Syrup" when applied to laxative medicine.

A NEW COAL-TAR ANTIPYRETIC IN TY PHOID FEVER.—Dr. J. W. Parrish, Shelbyvill Indiana, reports that while treating a sever case of typhoid fever he resolved to give th new therapeutic agent, Antipuralgos, a fa trial. He says: "My patient, Mrs. S. F—— had been suffering with a low form of feve for three or four days. The pulse ran up t 115 beats, and the temperature to 104° F becoming higher in the evening and lowe towards morning, with marked tenderness i the iliac region and severe diarrhœa. I pre scribed Antipuralgos in 6-grain doses, to b repeated every three hours, day and nigh until the temperature showed marked ev dences of a permanent decline. At my vis on the fourth day I found the temperatur 102½°, pulse 98, and learned that the patien had rested well during each night since th remedy had been used. I then directed th treatment with Antipuralgos to be continue and at my visit on the fifth day the temper ature had been reduced to 101°, with the puls at 92, and I ordered the remedy discontinue This case had spinal curvature and som chronic lung trouble, and was a bad case t test fairly the value of an antipyretic agen but I determined to try it, and to my amaz ment no depressing effect resulted from i use; and in this respect Antipuralgos differ from all other coal-tar preparations that have tried."

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Original Articles.

GALVANISM IN GYNÆCOLOGY.*

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Electricity and its phenomena constitute a science. Its known laws are capable of mathematical demonstration. Ohm's law is as invariable and supremely reliable in locating a break in the ocean cable as in determining the voltage required to remove a blemish from a baby's face. There is nothing mysterious, unreliable or variable in the lightning-like movements of this rapidly developing force when its known laws are controlled by an intelligent hand. It becomes an unwieldy, dangerous, and delusive agent only in the hands of the ignorant. As a servant it is mild and tractable; as a strange master its destructive powers are incalculable.

In considering this interesting subject, then, we should, in order to avoid any possibility of just criticism, confine ourselves to known facts. Let us examine these.

There are two distinct classes of facts which have much bearing upon our subject: *First*, those which have to do with the therapeutic agent under consideration, viz., electricity; and, *second*, those which have to do with the conditions influenced by the remedy, viz., the diseases.

First.—The following facts are known in regard to the physics of electricity:

(*a*) Two poles from an acting galvanic battery plunged into a dish of water will cause electrolytic decomposition of that fluid.

(*b*) Two poles from an acting galvanic battery plunged into a piece of lean meat will cause an electrolytic decomposition of fluid constituents between those poles.

(*c*) Two poles from an acting galvanic battery plunged into a portion of living tissue will cause electrolytic decomposition of fluid constituents at and between the poles.

(*d*) When two poles from an acting galvanic battery are plunged into a saline solution or a portion of dead or living flesh, we know that as a result of galvanic decomposition the alkaline radicals of this resultant gather around the negative pole, and the acid radicals around the positive pole.

(*e*) We know that a galvanic current of a certain density will cause the destruction of pus microbes.

(*f*) We know that local heat is developed in tissues through which a galvanic current is passed.

Second.—The following facts are known in regard to electricity in connection with diseased conditions:

(*a*) When tissue of low vitality, or abnormal tissue which has an intimate connection with the circulation, is acted upon by a strong current of electricity, certain small portions of it become electrolyzed or decomposed, and the products of such decomposition are carried away by the absorbents, and in consequence its bulk, in inverse ratio to its vitality and in direct ratio to the strength of the decomposing current, gradually becomes reduced.

(*b*) When a metal negative electrode is placed in contact with the mucous membrane of any portion of the body, or if this same negative electrode, in the shape of a needle or spear, is thrust into living tissue, and the current is completed by means of an indifferent electrode, we know that a current of a decided density will cause a rapid softening and decomposition of the tissue in contact with the active electrode, as a result of the caustic alkaline action of the radicals attracted to that pole.

(*c*) When a metal positive electrode is placed in contact with the mucous membrane of any portion of the body, or if this same positive electrode, in the shape of a needle or

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spear, is thrust into living tissue, and the circuit is completed by means of an indifferent electrode, we know that a current of a decided density will cause a rapid coagulation and hardening of the tissue in the immediate vicinity of such positive electrode, as a result of the acid action of the radicals attracted by that pole.

(*d*) We know that this characteristic action of the positive pole when conveyed to the interior of a hæmorrhagic uterus, in the proper manner, will cause a cessation of hæmorrhage from that surface.

(*e*)? (I place an interrogation point after this *e* because that which is to follow is not a well established fact.) I know that electricity in sufficient density, coming in contact with a suppurating surface, or passing through a tissue in which pus microbes are exerting their influence, will destroy their activity and, as a powerful germicide, will restore the parts to health.

(*f*) It is known that the galvanic current in decided doses will destroy the life of a human embryo during the first few months of its existence.

(*g*) The electro-tonic effect of the galvanic current upon living tissues is a fact which has been well established in gynæcological work; a fact which explains the sedative (anelectro-tonic) effect perceived at the positive pole, and the hypersensitive (katelectrotonic) effect perceived at the negative pole.

From the above facts we can draw the following summary: The promotion of absorption of pathological tissue can be accomplished by the electrolytic effect of the heat generated by the current. Local destruction of tissue can be accomplished by the concentration of a strong current, by means of a metal electrode, at any particular part; the cautery or destructive effect may be either an acid or an alkaline-caustic effect, according to whether the pole is respectively positive or negative.

The result of this local effect of the positive pole upon a hæmorrhagic surface is to coagulate albumin and blood and to check hæmorrhage. The result of this local effect of the negative pole is to destroy mucous membrane, small granulations, vegetations, and even small polypi, according to the strength and concentration of the current. The local effect of either pole upon a suppurating surface is to act as a powerful antiseptic, and as a consequence of this action, together with its stimulating effect upon the circulation and its powerful microbicide effect, resolution is rapidly promoted. In extra-uterine pregnancy, if deemed desirable to destroy the fœtus during the early weeks of conception, it can be painlessly accomplished by means of the galvanic current. Local pain can frequently be relieved by the anelectro-tonic effect of the galvanic current.

The field of electricity in therapeutics is properly narrow; and in proportion as we recognize this do the indications for its use become more sharply defined, and in the same proportion do our results become more brilliant. We must not forget, even in the flush of some brilliant success with galvanism, that surgery and medicine are still legitimate means of accomplishing cures. If electricity, surgery, and medicine become rivals for a particular case, let us keep ourselves in a position to weigh well the evidence in favor of each, and to decide without prejudice in favor of the proper means.

There are four conditions in gynæcology in which I consider that galvanism has a well defined place and in which it is difficult, in my opinion, to find a worthy substitute in medicine or in surgery. They are as follows:

1. Chronic endometritis.
2. Sub-involution of the uterus.
3. Removal of pelvic inflammatory deposits.
4. Some varieties of fibroid tumors of the uterus.

Chronic Endometritis.—I will include under this head chronic hypertrophy of the endometrium with vascular granulations, for which dilatation and curetting are frequently employed; chronic cervical catarrh in which the deep cervical glands are involved, and in which the characteristic impermeable plug of albuminous discharges is the perplexity of all gynæcologists; and lastly, chronic catarrhal inflammation of the entire endometrium.

In the first division—of chronic hypertrophy of the endometrium with vascular granulations—a strong negative intra-uterine application of galvanism is indicated. An intra-uterine sound, of some flexible form, with a diameter which will well fill the canal,

should be selected and carefully introduced into the uterus; this should then be connected with the negative pole of the battery, and the circuit completed by applying a large abdominal electrode. When all connections have been carefully attended to, the current should gradually be turned on until 100 m.-a. are registered by the milli-ampere-meter, unless the patient should previously declare that the current is stronger than she can bear, when it should be stopped well within the limits of toleration. If 100 m.-a. are tolerated easily, the current should be kept at that point for five minutes, and then gradually withdrawn. If a 100 m.-a. current is not tolerated at first, often by waiting for a moment the patient will easily tolerate the necessary dose. However, never force it; use tact and patience, and keep to the maximum dose tolerated. This treatment should be given as often as twice or three times a week. The patient should rest if possible in the recumbent position for an hour after the application. Hot vaginal douches should be given daily, and an antiseptic douche of 1:10,000 bichloride should be ordered for the morning before the treatment. The irritating discharge will cease, the dysmenorrhœa and hæmorrhage will ordinarily have disappeared by the second menstruation.

In the second division under the heading Chronic Endometritis—viz., chronic cervical catarrh in which the deep cervical glands are involved and in which there is the characteristic albuminous discharge—an entirely different method is employed. In the condition already referred to we utilized the characteristic local effect of the negative pole, because we sought an alkaline caustic effect, while here we seek the characteristic local effect of the positive pole in order to get the coagulating effect of that pole. Accordingly we introduce into the cervix a metal electrode which will fill the canal, and attach it to the positive pole, the circuit being completed in the ordinary way by means of an abdominal electrode. The current is then turned gradually on as strong as the patient will bear, or at least till 100 m.-a. has been reached. It should remain for five minutes. After the current has been turned off, and an attempt is made to remove the intra-uterine electrode, it is found fastened to the tissues. A little movement to and fro and a little gentle traction, however, will succeed in loosening it, and it can be removed. Upon its surface you will now notice a mass of white tissue completely surrounding the electrode, the outer surface being tinged with blood. This is the coagulated albuminous secretion which has hardened from the acid action of the pole; and upon examining the cervical mucous membrane you will find it completely denuded to the ultimate ramifications of the Nabothian glands. A strong application of chloride of zinc should now be applied to the denuded surface, and a cotton or wool tampon adjusted to absorb secretions. I know of nothing which will produce anything like the effect which is obtained with not more than from four to six of these galvanic applications in this perplexing difficulty.

In the third division under the heading of Chronic Endometritis—viz., chronic catarrhal inflammation of the entire endometrium—we have a remedy in electricity which, if not superior to proper application of Churchill's tincture of iodine or 10-per-cent. solution of chloride of zinc, is at least equally efficient. In this condition, with its relaxed mucous membrane and its characteristic milky discharge, the stimulating local effect of the negative pole should be utilized, with a milder current than that employed with the first form which we have considered. An electrode is introduced into the uterine canal which will fill it. It is made the negative pole, and in the same manner as before described a current is carefully switched on until 30 milli-amperes are registered. It should be retained at this point for five minutes. This treatment can be given with advantage about three times a week. Tonics, hot-water douches, laxatives, and outdoor exercise should not be forgotten in connection with this treatment.

Sub-involution of the Uterus.—This condition, the result of some fault of nutrition which leaves the uterus in a state of enlargement following the escape of the result of conception, either at term or otherwise, is one for which a cure can often be obtained by the judicious employment of galvanism. It must not be supposed that the cause can in all cases be removed by this remedy,

especially if it be a laceration of the cervix or perineum. Here, of course, we must not neglect our surgery if it should seem necessary after reducing the enlargement of the uterus. In all cases, too, we should combine our tonics with proper hygiene, and seek earnestly by all means to remove the cause of the difficulty. The reduction of the uterus, however, regardless of cause, can, as a rule, be accomplished by galvanism, and if the cause of the failure of involution has long since ceased to exist, as is occasionally the case, a cure at once is effected.

In the reduction of the sub-involuted uterus we employ the local effect of the negative pole and the interpolar effect of the current, which includes the electrolytic effect and the heat-producing effect. We also obtain the general tonic effect of galvanism, which is always excited by this agent when applied to the system.

An electrode of block-tin, platinum, silver, or any other flexible conducting metal, is adjusted so as to fill the canal of the enlarged uterus. Our object then, after completing our circuit, is to give all the electricity the patient will bear without distress. If the uterus is two, three, four, or five inches in depth, the patient will frequently bear 150 m.-a. This is a pretty fair dose, and the maximum current employed should not much exceed that figure. Patients who will not bear this current must be given as near the limit of their toleration as can be without producing exhaustion. Five minutes of the maximum doses should be given as a treatment. It can be given with advantage every second day.

As the uterus begins to reduce in size and to assume its natural proportions, and the uterine canal area is lessened in consequence, the doses must be proportionately lessened. The maximum dose for a normal uterus will not exceed 50 to 75 m.-a.

The effect upon this class is often most magical. The uterus will reduce rapidly in size. The old bearing-down pains gradually disappear. The pressure upon the rectum and the dragging upon the bladder cease. The general health of the patient usually improves rapidly, appetite becomes normal, sympathetic pains (including sacralgia, headache, and ovaralgia) are less frequent, and the menstruation (which as a rule has been rather profuse) assumes its natural condition.

Removal of Pelvic Inflammatory Deposits.—Much skepticism has been aroused among those who practice gynæcology with the knife alone, by the claim of those who employ electricity in gynæcology that the absorption of inflammatory deposits and adhesions may be promoted by galvanism. As an abdominal surgeon, as well as an electrician, I wish to state emphatically that I believe such skepticism to be utterly without foundation. Inflammatory deposits may be and frequently are absorbed, as the result of galvanism.

It is hardly necessary for me to describe these cases. They present themselves so frequently and with so many different complications to the general practitioner, as well as to the gynæcologist, that they are well known. One comes with the general immovability of all the pelvic roof, with the uterus fixed in its normal position; another with the uterus sharply retroverted or retroflexed and the fundus firmly adherent; another with lateral displacements, with thickened broad ligaments resembling tubular enlargements; while many others, with slighter but none the less complicated symptoms, are constantly observed.

Pain with every degree of severity is the prominent symptom of inflammatory products. Numbness and pain of the different areas of the lower extremities, as a result of pressure upon their nerve supply; difficulty in locomotion, from interference with nerve supply to muscles—to say nothing of the many symptoms which find their origin in the pelvis as a result of pressure—are a few of the many symptoms which must be carefully studied in every case of this kind.

Heretofore these cases have been the torment of the gynæcologist. Hot water, glycerin, iodine, and other stimulants, emollients, and alteratives, have been the main remedies depended upon, and their effect often after years of faithful application is hardly appreciable. From the unyielding disposition of this condition, many pairs of perfectly healthy ovaries and tubes have been sacrificed with the presumption that there was either pus in the tube or interstitial inflammation of the ovaries. It is needless to say that the sur-

gical procedure is without effect except to modify the disturbance at what otherwise would be the menstrual period.

The object in treating these cases with galvanism should be to get the current to traverse the tissues containing the exudate. The negative pole should be employed for the active electrode, and this electrode should be of the vaginal, rectal, or intra-uterine variety.

If the vault of the vagina in the posterior cul-de-sac is the seat of the exudate, a vaginal electrode covered with moistened absorbent cotton should be pushed well up in the vaginal vault behind the cervix, and, after the attachments have been made, a current of 50 m.-a. should be employed for five minutes. If 50 m.-a. are not tolerated at the first few applications, give as near that dose as possible without transcending the toleration of the patient.

If the exudate completely surrounds the uterus, a negative intra-uterine electrode may be employed, especially if there is some endometrium complication. The dose here should not exceed 50 m.-a.

The rectal electrode is employed very seldom. It is limited to the removal of exudates when surrounding the rectum, or occasionally for a mass in the cul-de-sac of Douglas; 25 to 30 m.-a. is about the dose tolerated at this point, and the pole should always be negative.

From three to six months' treatment, the applications averaging three times a week, is usually sufficient time to accomplish the absorption of a very well marked inflammatory exudate. Until a fair trial is made of this treatment, one is liable to be incredulous when told of the results which can really be accomplished.

Two cases which demonstrate the wonderful effect of electricity in this direction, I will quote briefly, because the results were witnessed by others. They were both cases in the Woman's Hospital of Chicago, and were both referred to me for treatment by the late Professor W. H. Byford. One had been under his care exclusively, while the other, at different times, had been under the care of almost every other member of the visiting staff of the hospital. They had both been treated for months by means of hot water, iodine and glycerin, and general tonics, without the slightest improvement. The conditions in the two cases were identical. The uterus was enlarged, retroverted, and perfectly immovable from a thick, strong exudate surrounding the organ on all sides. The uterus could not, in either case, be reposited by any means ordinarily employed. Both women were bedridden. Backache, constant pelvic pains, constipation, and inability to walk, were some of the prominent constant symptoms, with profuse and excessively painful menstruation as a periodical accompaniment.

In three months' time, by the employment of the means I have already described, in both these cases the entire pelvic exudate had disappeared, and the uterus had become movable and could be reposited and retained in place with a pessary without the slightest discomfort. One of the patients has since submitted to an operation for shortening the round ligaments, and is now in perfect health. The other still wears a pessary, and is as nearly well as one can be who is dependent upon one of those instruments.

Some Varieties of Fibroid Tumors of the Uterus.—After a large experience in the treatment of fibroids of the uterus with electricity, I have learned that all cases are not equally suitable for the treatment. A large subperitoneal tumor with a small pedicle attached to a small uterus should be turned over to the knife. A small knotty tumor with irregular surfaces, and with a history of irregular periods of exhaustive hæmorrhage and severe pain, between which are months of comparative rest from hæmorrhage and pain, should be looked upon with suspicion by electricians. The uterine canal should first be thoroughly dilated in these cases, and a thorough trial of ergot instituted if there are any submucous projections. If in dilating the canal no projecting submucous growths are discovered, electricity can at once be commenced with confidence of success.

Cases in which the uterine canal is displaced to such an extent that it is impossible to enter it with any form of intra-uterine electrode must be treated by means of the galvano-puncture. This treatment should never be given unless the patient is in a

hospital or in some place where her movements can be perfectly controlled. Even then the treatment is severe, and the longer I practice gynæcology the more am I inclined, in these particular cases, to urge Tait's operation as a substitute, which, while it has a rather high death rate in comparison, has the advantage of offering more prompt relief and with but one operative procedure to obtain its results, instead of several which are necessary with the galvano-puncture.

The above three varieties cover the rare cases in which electricity possesses a rival in medicine or surgery for the relief and cure of fibroids of the uterus. The three varieties mentioned constitute, together, not more than 25 per cent. of all the cases which come to the gynæcologist for treatment. The other 75 per cent. should be submitted faithfully to the influence of galvanism, according to Apostoli's principles, before they are allowed to risk their lives upon the operating-table.

I shall confine my remarks on the treatment of fibroids entirely to the intra-uterine application. We depend for our results in this treatment upon the following effects of galvanism:

1. Local effects of the negative pole.
2. Local effects of the positive pole.
3. The polar and interpolar electrolytic effect of galvanism.
4. The calorific effect of the current.

Besides these physical facts we depend on the chemical fact of the wonderful tonic effect of the current as exerted upon the patient, and on the marked nutritive changes which are often observed but which are not so readily understood and explained.

In all cases of fibroids where hæmorrhage is a prominent symptom, or there is an excessive uterine discharge, the negative pole is employed intra-uterine. A maximum dose of 200 to 300 milli-amperes is then desirable, or a maximum dose of 25 milli-amperes for each square centimeter of exposure of the electrode to the uterine mucous membrane. When the positive pole is employed for the purpose of modifying a hæmorrhagic condition, a dose is *required* of 25 milli-amperes for each square centimeter of active surface which comes in contact with the mucous membrane of the uterus.

An interstitial fibroid, varying in diameter from 5 to 12 inches, distributed equally in all the walls of the uterus so as to make it resemble a pregnant uterus at varying stages of development, and enlarging the whole uterus so that the canal is lengthened from the normal to one from 4 to 6 inches in depth, with no history of excessive hæmorrage, should be treated in the following manner: The uterine canal should be measured as nearly as possible, both as to the length and diameter. A uterine metal electrode of block-tin, silver, copper, or platinum, should be selected which will conform in diameter with the estimate made of the diameter of the uterine canal. This sound or electrode should then be gently introduced, and its flexibility will allow it to conform to the irregular course of the canal. The portion of the electrode outside of the canal should be insulated from the vagina with a rubber muff. The negative pole of the battery should now be attached to this electrode, and, after the abdominal electrode is carefully adjusted and all the connections are secure, the current should gradually be turned on, carefully at first, until the necessary strength is obtained. If the tumor is a large one, varying in depth from 8 to 12 inches, 200 to 300 m.-a. may be employed without danger of excessive cauterization. If the tumor measures between 4 and 8 inches, a current of not more than 100 to 200 m.-a. should be administered, the 100 for the smaller limit and gradually increasing 25 m.-a. to the inch until the larger limit will require 200 m.-a. These figures cannot be depended upon in all cases; the sensibilities and temperament of our patients are liable to shatter iron-bound rules. They represent, however, approximately the truth, and should be followed as closely as possible. The application should last about five minutes, and the patient should be required to remain quiet for at least thirty minutes after the application is finished.

It is hardly necessary to remind an intelligent audience of physicians in this day, that all these manipulations with electricity in gynæcology are carried on under the strictest aseptic rules.

If the above typical case had presented a history of flooding at the menstrual period,

instead of the normal flow, an entirely different course would have been necessary for its successful treatment. An electrode of pure platinum would have been necessary. After selecting one which would have filled the uterine canal, and adjusting the insulating muff, the electrode would then have been connected with the positive pole of the battery.

In estimating the strength of the current necessary to check hæmorrhage, we have to be more particular to reach a certain proportionate density. For instance, I demonstrated three years ago, by experiment, that the density should be in the proportion of 25 m.-a. for each square centimeter of active surface in contact with the mucous membrane of the uterus. If, for example, the portion of the sound which is required to fill a given canal has a surface of 8 square centimeters, the current *required* to get the characteristic effect of the positive pole over that surface sufficient to check hæmorrhage is 200 m.-a. I have said that proportion of current strength was *necessary*. If we find a patient who will not tolerate the current which is necessary to cauterize the whole surface at one application, it will be necessary to adopt a means which will allow us to attack a portion at a time, thus dividing the aggregate strength of the current while retaining the same relative density. The result of my experiments also led to the solution of this problem, and my intra-uterine concentration electrode was the result.

By utilizing the principles adopted in these electrodes one is enabled to get the characteristic effect of the positive pole concentrated at any required portion of the mucous membrane of the uterus without transcending the powers of endurance of the most sensitive patient. Dr. Apostoli has recognized this principle and has since adopted it in the form of his carbon intra-uterine electrodes.

In ordinary non-hæmorrhagic cases, then, we employ the negative intra-uterine application with a current as strong as the patient will bear, up to the limit of 25 m.-a. for each square centimeter. I select two cases from more than two hundred which I have treated by Apostoli's method as modified in some minor details by myself, with the idea of discovering to you a little more in detail the *modus operandi* of this treatment. These particular cases are selected not because they represent anything unusual in the way of results, for they do not, but because they are two cases referred to me by men who stand eminent in the profession as gynæcological diagnosticians, and because I am sure these gentlemen will verify, if necessary, to any doubting Thomas the statement in regard to the results obtained; and then, too, these cases were under the constant observation of several other physicians during the entire course of treatment; and finally, they are cases to whom I am at liberty to refer any scientific observer coming in the right spirit, who may wish more convincing evidence from personal observation.

Case 1.—Mrs. X——, aged 30, mother of several children, was referred to me by Prof. D. T. Nelson, about a year ago, for galvanic treatment for a bleeding fibroid. Patient very anæmic, weak, and thin, from repeated exhaustive floodings. Constant pain in pelvis; pressure on bladder and rectum; locomotion accomplished with difficulty on account of pelvic pain and pressure. From physical examination, uterus found much enlarged and extending nearly to umbilicus. Uterine sound entered canal to the depth of six inches, and deflected to the left. Some hæmorrhage followed the introduction of the probe. Treatment was commenced at the Woman's Hospital, and later as the patient improved was continued at my office.

At the beginning of the treatment an Apostoli electrode was employed, and continued for two weeks three times each week. The electrode was inserted to the bottom of the canal, and as strong a current as the patient could bear was administered (the canal being so deep and the exposure of the electrode so large, there was no danger of undue cauterization), reaching at times as high as 250 m.-a. At the end of the two weeks, treatment was suspended. Finally, with some pain, the flow appeared with great suddenness and with all the violence of former times. The patient was referred back to Dr. Nelson. All the ordinary remedies, including ergot and hydrastine, were employed, but without the slightest avail. The flooding continued four, five, six, seven, and eight

days, without any tendency to cease. The patient was almost completely exsanguinated. Tamponing of the vagina was systematically resorted to. There was no uterine pain, after the outset; no uterine contraction to speak of. The hips and lower extremities were elevated to assist in controlling the waste. At last, after twelve or fifteen days, slight pains of cessation appeared. She was gradually nursed back to life, and at the end of six weeks was able to go about in a wheel chair.

Consultation discovered that a marked decrease in the size of the tumor had occurred. I also learned that during my treatment of the case with electricity, and until after the hæmorrhage had been continuing for some time, large doses of ergot and hydrastine had been administered to the patient. This I believe was a mistake. I have seen the same course pursued in other cases with the same bad results. During my treatment of this case menstruation was temporarily postponed. This was no doubt caused by a partial sealing of the vessels of the mucous membrane of the uterus as an effect of the use of the positive pole—forming as it did a temporary dam. Ergot in large doses was being systematically administered, which had a tendency to produce powerful uterine contraction. These contractions in time caused an expulsion in mass of this dam of coagulated tissue which had prevented hæmorrhage. This succeeded at once, of course, in uncovering the bleeding vessels more than ever before, and a hæmorrhage naturally followed which well-nigh ended our patient. The ergot caused the difficulty. I make it a rule never to give large doses of ergot at all when employing electricity for hæmorrhage, and none at or near the menstrual period.

From this time on, our patient rapidly improved under the same form of treatment that was at first given, minus the ergot and hydrastine. The uterus rapidly decreased in size, the hæmorrhage ceased, the menstruation became less than normal, the patient began to walk, and at the end of three months' time considered herself a well woman. This was about six months after the first treatment. The uterus was but little more than the normal size. The patient at the present time is perfectly well.

Case 2.—This case was referred to me from the outdoor clinic of St. Luke's Hospital, by Dr. Frank Cary. Mrs. Z——, aged 40, mother of one or more children, presented herself at the clinic of the Post-Graduate Medical School about one year ago. She had been suffering with exhaustive hæmorrhage, which of late had become almost continuous. For about three years, ergot, astringents, and all other forms of conservative treatment had been carefully instituted, including curetting, without the slightest improvement being manifest. Upon examination I found a uterine tumor extending to the umbilicus, and a canal nearly eleven inches in depth. The uterine walls seemed equally hypertrophied in every direction. The slightest probing was followed by profuse hæmorrhages. The patient was in a state of extreme weakness, pale, nearly bloodless, and unable to make more than the feeblest efforts to assist herself. What was to be done with her? We had an uterine canal nearly eleven inches in depth, and a patient who from extreme weakness would not tolerate more than 100 milli-amperes. The canal would admit a flexible bougie about five millimeters in diameter, and it was necessary to attack every portion of that uterus with the positive pole, using a minimum current density of 25 m.-a. for each square centimeter of surface. Clearly, if it was to be done at all, it would be necessary to attack it piecemeal, as an electrode which would completely fill the canal at all points of its enormous surface would require a current of nearly 1100 milli-amperes in order to obtain sufficient density to check hæmorrhage.

Therefore we chose an electrode of 4 square centimeters active surface and 5 millimeters in diameter, and commenced attacking the bleeding surface in small portions. At the first treatment this electrode, with its distal end exposed, was inserted to the bottom of the canal, and the desired 100 m.-a. current allowed to act for five minutes. After the current was turned off, the electrode was advanced just the distance of the length of its active surface, and the current turned on for five minutes longer. In this manner about two inches of the distal end of the uterine canal was pretty thor-

oughly covered. As soon as the canal was partially treated, the hæmorrhage commenced to decrease, and the intermenstrual flow had entirely ceased when it was completed. Of course the process was repeated with as great frequency as possible, the patient taking treatments as often as every other day a portion of the time. After two months' treatment the intermenstrual hæmorrhage was entirely checked and the menstruation was materially lessened. After hæmorrhage had been controlled, the patient was treated during the early parts of the month with the ordinary Apostoli electrode, and frequently tolerated as high as 300 m.-a.

The patient not only improved as regards hæmorrhage, but she improved in every way from the start. The tumor began to reduce, the general health was better, locomotion became less difficult, pain subsided, pressure symptoms disappeared, and in every way the patient manifested signs of getting well. At present she is well—no hæmorrhage; menstruation very slight; no symptoms of any kind, and the woman is working very hard at manual labor earning her own living. The tumor is a mere relic of the past. Uterine canal measures 3½ inches; a slight enlargement of the uterus can be discerned on manual examination.

When the entire mucous membrane of the uterus is attacked at a single treatment, the application should not be given oftener than two or three times a week. Where the concentration electrodes are employed, and only a portion of the canal is treated at each sitting, the application can be given with advantage as often as every day.

I have described only typical cases in my treatment of this subject. If you find cases where the uterine canal is tortuous, you will require flexible electrodes. This I have supplied in connection with my concentration electrode. It is possible with these electrodes to enter any canal which it is possible to traverse with the most flexible bougie. By employing these you will find it practicable to administer the intra-uterine treatment in many cases where those without them would be obliged to resort to puncture.

I have covered in this lecture ground which, if properly developed, would fill a volume. Consequently I have left much of importance unsaid. This subject of electricity must be studied and labored with if it is to be understood. It must be handled with dignity as a great controllable fact, not as an irresponsible source of amusement, if by its effects we expect to command the respect of a scientific profession.

Chicago, Ill.

ON SOME OF THE TROPHO-NEUROSES ASSOCIATED WITH ABNORMALITY OF THE THYROID GLAND.*

Dr. Solomon Solis Cohen reported and exhibited photographs of two cases of acromegalia, in both of which there was apparent absence of the thyroid gland, and marked skeletal changes in addition to those in the face, hands, and spine. The patients were males, one 25 years of age, the other 51 years old. In neither case was there any eye-lesion. The case of the younger man had been previously reported to the College of Physicians. In the elder man headache, drowsiness, forgetfulness, thickness and scanning of speech, and excessive polyuria, were present. The symptoms had been partially relieved by picrotoxin, the headache especially. This drug was a vaso-motor regulator and useful in many of the conditions to be discussed. It was necessary to say "apparent absence" of the thyroid gland, because only post-mortem could absence or atrophy be unqualifiedly affirmed. Embryologically the pituitary body and thyroid gland were intimately related, and it appeared not improbable that the enlargement of the former and the consequent hemianopsia and other cerebral symptoms noted in some cases of acromegalia might be due to an attempt by nature to supply the absence of an important structure by compensatory hypertrophy of an allied structure.

A number of cases in which the thyroid gland could not be demonstrated and which presented some, but not all, of the changes found in typical cases of acromegalia, were likewise related. In one such case the hands and ears presented marked local asphyxia

* Abstract of a paper read before the Philadelphia County Medical Society, Feb. 8, 1893, by Solomon Solis Cohen, M. D., Professor of Clinical Medicine and Applied Therapeutics in the Philadelphia Polyclinic, etc.

(Raynaud's disease), while the pain and transient redness developed in the feet upon exertion were suggestive of the condition described by Weir Mitchell under the name of erythomelalgia. In another case, an aged man, there were cardiac lesions and muscular tremors, with wasting, as in progressive muscular atrophy.

Other cases observed by the speaker in which thyroid atrophy apparently existed were: one case of hypertrophic osteo-arthropathy with emphysema and fibroid phthisis, in a man 50 years of age; one case of scleroderma with cardiac lesions, muscular tremors and mental changes, in a woman apparently quite aged, who insisted, however, that she was less than 40 years old; and one case of unilateral spontaneous gangrene and ulceration of the toes and leg (Raynaud's disease), with bilateral spasmodic vascular phenomena, in a woman over 60 years of age. In the latter case certain changes in the fingers and nails existed, which in one finger resembled those of acromegalia, in another finger those of rheumatoid arthritis, in another finger those of sclerodactyle, the nails of all the fingers being curved like those of the Hippocratic finger, as in pulmonary hypertrophic osteo-arthropathy. That this latter condition of the nails and finger-tips could be ascribed to interference with nutrition through the circulation, was held to be shown by the occurrence, in cases of cardiac disease without pulmonary or obvious nervous lesion, of fingers indistinguishable, and of which pictures and tracings were exhibited.

Taking up conditions of trophic and vascular disturbance associated with enlargement of the thyroid gland, Dr. Cohen briefly alluded to exophthalmic goitre, myxœdema, and cretinism, laying stress upon the fact that as, on the one hand, in acromegalia there might be enlargement instead of apparent absence or atrophy of the thyroid gland, so, on the other hand, in myxœdema and cretinism the goitre might be lacking, while experimental thyroidectomy, as well as the *cachexia strumipriva* that followed surgical extirpation of the gland, proved that the symptoms were due to a functional atrophy of the gland, whether or not there was hyperplasia of the non-essential anatomical elements. Stress was laid upon the varied vaso-motor disturbances in all these marked conditions.

In one case of Raynaud's disease—an affection which, so far as the vaso-motor phenomena are concerned, is also an antithesis of Graves's disease—Dr. Cohen had observed in an anæmic girl, with occasional tachycardia, an intermittent enlargement of the thyroid, just as is observed in certain cases of exophthalmic goitre and in certain ill-defined cases for which he had proposed the name of *vaso-motor ataxia* (which latter could not be called exophthalmic goitre, but in some instances might readily develop into that condition). These latter cases, observed both in males and females, but principally in the latter, and in hysterical subjects more often than in others, showed as an almost constant feature the intermittent presence of hæmocytes in the urine; sometimes, but rarely, transient or intermittent albuminuria as well. In some cases lithuria and oxaluria had been noted, especially in those of rheumatic, gouty, or diabetic families; still more rarely casts or cylindroids had been found. These observations were related with the occurrence of hæmoglobinuria in Raynaud's disease, and of hæmaturia and other hæmorrhages such as purpura, hæmoptysis, and hæmatemesis (all of which the speaker had personally witnessed) in Graves's disease; as well as with the occasional albuminuria of the latter, and the polyuria, albuminuria and glycosuria of myxœdema and of acromegalia, and the morbid perspiration and localized œdemas and flushes of all these conditions, and of angio-neurotic œdema—in which latter condition he had also found hæmocytes in the urine during and after paroxysms affecting the throat in one woman and the arms in another. In some of his cases of vaso-motor ataxia—a condition which varied much in its severity, from but slight abnormality to such marked affections as those associated with the names of Graves and Raynaud—the author had observed hæmatemesis with symptoms suggestive of gastric ulcer, anæmia, menstrual irregularities, migraine, transient localized œdema, transient local blushing, permanent dilatation of isolated groups of capillaries and venules, stigmata, local syncope, erythema nodosum,

and urticaria; in one case there had been transient blindness. In two other cases, in which, however, no thyroid abnormality had been detected, there had been membranous enteritis. Subjective and objective coldness of the knees was marked in one case in which the thyroid was enlarged. In another case, the first observed by Dr. Cohen in a male, there had been great rapidity of the heart's action and intermittent goitre as well, so that the case might well have been called Graves's disease, and doubtless belonged positively in that category. Strictly circumscribed erythema and factitious urticaria could be readily produced in all these cases by writing upon the skin with a probe, or in some instances applying cold to the part. In a colored woman with exophthalmic goitre the effect was almost startling.

The connection of rheumatism with Graves' disease, and the heredity of both, were too frequent to be a mere coincidence. In certain cases of rheumatoid arthritis the thyroid gland was found to be enlarged, and tracings were shown of the fingers of an old man with rheumatoid arthritis and arthritic muscular atrophy, in which the parrot-beak pad and nail were shown in the terminal phalanx of the thumb, which was hyper-extended, while the sharpened and atrophied terminal phalanges of other fingers resembled sclerodactyle, and were almost identical with the tracings from the case of Raynaud's disease. Allusion was made to the tetany of thyroidectomy and the tremors of exophthalmic goitre, some cases of myxœdema, the speaker's cases of scleroderma and of Raynaud's disease, and some of his cases of vaso-motor ataxia; as also to the occurrence of phenomena like those of Raynaud's disease in certain cases of scleroderma, the anæmia, and the extreme susceptibility to cold which was a feature of all the conditions described. To complete the list of associations observed, and admitting that they might be coincidental, there were many reported in connection with the occasional occurrence of epilepsy in Graves's disease—two cases of the speaker's, in one of which *petit mal* had developed in an anæmic girl with enlarged thyroid and occasional tachycardia, and in the other (a male, with enlarged thyroid) tachycardia and flushed face accompanied the epileptic paroxysm. The not infrequent termination in phthisis of many of the conditions alluded to might have no other significance than impaired nutrition; but the recent observation of hæmoptyses occurring only during paroxysm in one case of epilepsy without appreciable pulmonary lesion, and in one case of local asphyxia with but trifling signs on the chest and a few tubercle bacilli in the sputum, had suggested the thought that vascular disturbances in the lung might be the determining factor. Finally, attention was called to the success of various observers in treating myxœdema by implantation of a thyroid gland, by injections of thyroid extract, and by feeding with fresh thyroids. It was suggested that the same treatment might be of benefit in many of these varied conditions narrated.

The speaker desired to avoid premature assertion of causal relationship, and had therefore made use of the words "associated with," rather than "dependent upon" abnormality of the thyroid gland, in describing the trophic, neurotic, and neuro-vascular phenomena discussed; some of the complicated associations he had been unfortunate enough to meet with were doubtless purely fortuitous. The tendency of diagnosticians was naturally to discriminate among groups of phenomena presenting similarities, and thus to divide rather than unite. Nevertheless, the student of pathology in its broad sense must be on the alert for commonalty of phenomena, and certainly the very variety of the nutritional disturbances associated with abnormalities of the thyroid gland indicated a profound relationship among them, dependent upon the important metabolic functions of the gland.

The researches of many observers, in particular Horsley, had demonstrated this metabolic importance, and that the secretions of the gland acted on the organism in some way. Dr. Cohen believed that they were in truth chemio-tactic or regulatory, and that individual constitution, heredity, environment, habits, and the like, determined the particular direction in which failure of their function would be manifested. Most certainly an intimate relation existed between the thyroid gland and the visceral nervous system, more especially the vaso-motor mechan-

ism. Of course, under the conditions, it was difficult to separate primary from secondary phenomena—the mediate results of the train of action of a mechanism from the immediate results of the influences that had set the mechanism in action. The main purpose of the paper was to suggest more common observation, clinically and at autopsies, of the thyroid gland, so that sufficient data might be collected by a number of observers in order to determine what is accidental and what essential.

PHARMACY AS AN AID TO THERAPEUTICS IN THE TREATMENT OF DISEASE.*

BY JOHN R. KESTELL, PH.C., M.D.

Having by education and experience become identified with the professions of pharmacist and therapeutist, I can with reasonable propriety testify to the dependence of one on the other.

Pharmacy, which includes pharmaceutical chemistry, is an art that teaches the knowledge, choice, preservation, and combination of remedies (which may or may not be founded on chemical action), and, in its practical features, compounding and dispensing; while *Therapeutics* is confined to treatment of disease, and known by some as that department which comprises an explanation of the *modus operandi* of medicines.

In observing the mutual relations of pharmacy and therapeutics, one of the first to be suggested to my mind is reciprocal dependence. Specialties are an outgrowth of man's accumulating knowledge within a given line. Even as a specialist, man is unable to acquire a perfect mastery of a single branch of medicine, though he spend his whole life in that direction. The true specialist uses all ascertained and matured facts to aid him in his study and practice. Thus his power to understand and comprehend is increased if not multiplied. The therapeutist is dependent upon the accumulated wisdom and perfected work of the pharmacist, for from his hands must come pure, honest material that is to produce anticipated and desired results. On the other hand, the pharmacist is dependent on the practitioner in medicine for facts and forms as to conclusions and results, to enable him to avoid useless work and to direct him in honest effort in the right direction.

Thus, in my opinion, the ideal therapeutist, by information secured in two branches of learning, coupled with practice and observation, must accomplish more in the treatment of diseases than one whose experience is deficient in pharmacy. Instead of the practitioner in medicine relying on the pharmacist for the purity and general character of his medicines, he can with confidence and increased pleasure fall back on his own knowledge acquired as a pharmacist, and satisfy himself as to the genuineness of medicaments. It is to be regretted that in some of our medical colleges pharmacy is subordinated to other branches, and in some not taught at all. 'Tis a fact that graduates of some of our medical schools have not even a rudimentary knowledge of pharmacy, let alone skill in its practice.

It is well known that the majority of constitutional diseases, as well as diseases of the blood and digestive system, owe their origin to changes largely of a chemical nature; and, to my mind, medicines that are prescribed by the practitioner for mitigating these ailments should be thoroughly understood as to their origin, purity, and compatibility in conjunction with other remedies. There are many physicians who prescribe and dispense with utter disregard to the properties of medicines, their compatibilities and after-results, when if they had proper understanding in pharmacy and pharmaceutical chemistry they could do otherwise. I know it to be a fact—and pharmacists of large experience will support the statement—that the most successful practitioners in medicine are those who prescribe or dispense with regard to simplicity, pleasantness, and chemical compatibility, and whose education has been that of a pharmacist as well as therapeutist.

Prof. Attfield had the best of reasons for characterizing chemistry by saying it was the handmaid of medicine. Take for example that most valued medicament hydrargyr subchlor. (calomel): how often has it been and still continues to be, used in the absence of any alkali; which is a dangerous practice as it is well known that in passing through the stomach, which is normally acid (with

* Read before the Wayne County Medical Society, March 2, 1893.

the exception, perhaps, of the pyloric extremity) and contains an excess of chlorides, its properties are greatly changed, thus defeating the desired end—whereas a small equivalent of alkali would prove a safeguard to neutralize any acid with which it might come in contact. The physiological action of calomel in acute hepatitis and jaundice—the latter being a symptom in which it is said to promote elimination of bile as well as prevent its reabsorption—is too well known for me to enlarge upon; but how very important it is that it should pass through the stomach as little altered as possible!

My experience in the treatment of intestinal indigestion and constipation due to liver trouble has been of the most successful nature since I have administered in capsules the necessary drugs for ameliorating the conditions mentioned. Particularly has my attention been called to the action of fluid extracts, etc., of drugs when given in liquid media for the relief of said troubles; although partly successful, nothing like the full effect of the medicaments was obtained until they were prescribed in capsule form.

It is plainly to be seen that articles are more or less modified by the secretions of the stomach, whereas by the time the capsule is dissolved it has about reached the pyloric extremity. I think this a very important point and one worthy of serious consideration; and it goes strongly to show the necessity of more attention to pharmacy as an ally of medicine.

Ipecac and its combinations I hold in very high esteem. Whether by stimulation or by indirectly promoting secretions, it has been found very valuable in bronchial and laryngeal troubles, atonic dyspepsia, in the congestive stage of pneumonia before solidification has taken place, and in relieving rigidity of the os uteri. How important it is that it should be of proper alkaloidal strength!

How often is pepsin associated with alkalies, when it is well known that experiments go to show that pepsin with such mixture is rendered *inert*. My belief is that the only true way to use pepsin is with dilute hydrochloric acid. I have little confidence in wines of pepsin, as many have an excess of alcohol—which coagulates albumin.

Objections are in order against combining nitrate of silver, permanganate of potash, or chlorate of potash, with organic matter, as the tendency is strongly towards chemical changes, thus again defeating our ends.

I may go further and relate how the pharmaceutical chemist has created preparations, at the suggestion of the physician, for the treatment of anæmia, chlorosis, syphilis, and diseases further associated with disorders of the circulatory system in which there may be deficiency or excess of certain elements. I may mention the celebrated Blaud's Pill, Syrup Hydriodic Acid, Syrup Hypophosphites, Three Chlorides (being a combination of the chlorides of iron, arsenic, and mercury), all of which in their respective spheres have been of great assistance to the physician, combining pleasantness of administration with simplicity and definiteness.

It is with further pleasure I notice the isolation of alkaloids from crude drugs, and their combination with innocent material in the form of triturates, thus securing the full physiological action of the drug in a small and convenient compass; the standardization of fluid extracts and tinctures; and the general effort on the part of the pharmacist to satisfy the demand of the progressive physician.

The profession at large exhibit occasional interest in this important question. The American Medical Association, by its action at the meeting held in Washington in 1891, invited delegates from the American Pharmaceutical Association to attend the next meeting, for which occasion a Section devoted to Pharmacy was reserved. It has, I am proud to admit, already borne good fruit.

Suffice it to say in conclusion that it is my earnest hope, as a result of some years of observation and practice with the professions of pharmacist and therapeutist, that the therapeutist of the future will find in the study of pharmacy a valuable aid in solving the difficulties attending the treatment of disease in its protean forms.

"PHYSICIAN'S REQUISITES."

BY T. F. CAMPBELL, M.D.

To be ready on all occasions, hypodermic tablets may be carried in pocket, as follows,

the first six being contained in a P. D. & Co. hypodermic syringe:

Morph. sulph., $\frac{1}{4}$ grain.
Atropia sulph., $\frac{1}{75}$ grain.
Morph. and atrop., $\frac{1}{4}$ grain and $\frac{1}{150}$ grain.
Apomorphia, $\frac{1}{10}$ grain.
Cocaine mur., $\frac{1}{4}$ grain.
Pilocarpine, $\frac{1}{8}$ grain.
Nitroglycerin, $\frac{1}{100}$ grain.
Digitalin, $\frac{1}{150}$ grain.
Strych. nit., $\frac{1}{30}$ grain.
Ergotole fluid, say 2 drachms.
Quin. mur. carbam., 3 grains.
Co. cath. granules, $\frac{3}{4}$ grain.

The above, with instruments having detachable handles (B. S. Comstock Manufacturing Co., New York), in a pocket-case (Davidson Rubber Co., Boston, Mass.), all antiseptic, form a miniature emergency case —always at hand like a time-piece.

For a larger supply, tablet-case may contain:

Fl. ext. digitalis, 1 minim.
Tr. strophanthus, 2 minims.
Acetanilid, 2 grains.
Comp. cath., imp., 1 grain.
Aloin et podoph., ää $\frac{1}{2}$ grain.
Hyd. c. creta, 2 grains.
Pilocarpine, $\frac{1}{8}$ grain.
Calomel co., $\frac{1}{2}$, $\frac{1}{6}$, and $\frac{1}{18}$ grain.
Bis. subnit., 2 grains.
Ammon. chlor. et glyc.
Cupri arsenitis, $\frac{1}{100}$ grain.
Potass. arsen., $\frac{1}{50}$ grain.
Cocaine mur., $\frac{1}{8}$ grain.
Cerii oxalat., 1 grain.
Ext. scill. co. fl., 1 minim.
Santonin, $\frac{1}{8}$ grain.
Ext. vib. prunif., 1 grain.
Caffeine cit., 1 grain.
Codeine, $\frac{1}{8}$ grain.
Morph. acetat., $\frac{1}{8}$ grain.
Pulv. opii, $\frac{1}{4}$ grain.
Morph. sulph., $\frac{1}{8}$ grain.
Quin. capsules, 2 grains.
Extract ergot, 2 grains.

But to contain as near as possible all, including usual antidotes, "The Improved Leader," an elegant satchel (Western Leather Manufacturing Co., Chicago), only 4 x 4½ x 12, will contain:

Santonin.	Acetanilid.
Res. podoph.	Pepsin.
Calomel.	Cerii oxalat.
Leptandrin.	Sulfonal.
Sodii bicarb.	Antipyrin.
Pulv. Doverii.	Potass. bromid.
Bis. subnit.	Chloral hydrat.
Pulv. opii.	Zinci oxidi.
Morph. sulph.	Potass. chlor.
Tr. aconit. tabs., 1 min.	Zinci sulph.
Cocaine.	Acid, tannic.
Cupri arsen., $\frac{1}{100}$ grain.	Co. cath. pills.
Brown mix tablets.	Pancreatin.

In one-ounce bottles:

Fl. ext. ergot.	Aq. menth. pip.
Syr. scillæ.	Vin. ipecac.
Hayden's vib. co.	Fl. ext. jaborandi.
Olive oil.	Tr. opii camph.
Fl. ext. black haw.	Syr. scillæ co.
Castor oil.	Sulph. calcine.
Tr. opii deodor.	Ichthyol.
Tr. ferri mur.	Fl. ext. cactus.
Spts. nit. dulc.	Fl. ext. digitalis.
Ferri dialysata.	Tr. strophanthus.
Acid, carbol.	Ammon. carb.
Tr. iodini.	Quin. capsules, No. 3.
Glycerin.	Quin. capsules, No. 1.

Sundries:

Medicine-dropper.	Pearls of amyl nitrite.
Pocket prescription-scales.	Powder papers.
Adhesive plaster.	Syringe.

Throat brushes, etc , etc.

In 2½-ounce bottles:

Chloroform.	Ether.
Alcohol.	Hydrogen peroxide.

In arranging the above, the colors will help to dissinguish, and each may be well labeled on the cork or bottle.

The aim of the above is that with good instrument cases a physician may be as well as possible armed for all calls day or night, even if out remote from drug stores or when they are closed.

Another article may deal with office furnishings, but at present it should not be forgotten that catalogues of all book, instrument, and drug houses are most important; for by scanning them the physician, though he may not have "the earth" at hand, knows its goods in his line and how to get any of them at a moment's notice.

THE ADVANTAGES OF A PHYSICIAN DISPENSING HIS OWN MEDICINE.

BY CARYL B. STORRS, M.D.*

This is a subject which has been discussed to a great extent, both pro and con, for a long time. The principal reasons which have

* Read before the Wayne County Medical Society, Feb. 16, 1893.

been given in favor of every physician being his own druggist, may be given as follows:

1. To make a physician more independent.
2. On account of the habit of substitution, prevalent among certain druggists.
3. To make sure of exhibiting pure and fresh drugs.
4. To prevent refilling of prescriptions without the physician's knowledge.
5. To show his disapproval of the practice of counter-prescribing and the selling of patent medicines.
6. To centre the pecuniary profits upon the physician.
7. To assure cleanliness in the preparation of medicines.
8. To educate the doctors to practical pharmacy.
9. To inspire confidence in the patient.
10. To check the growing use of proprietary medicines by the profession.

I think that under these heads the subject is thoroughly covered, and by the consideration of them we should certainly arrive at some conclusion. Let us take them up in order and briefly weigh their bearing on the question.

1. *To make a physician more independent.* This head really covers the entire subject, and its elucidation will be brought out by the consideration of the others. Upon the druggist the physician depends for coöperation in the treatment of his case, and oftentimes for its successful termination.

2. *Substitution.* That the habit of substitution, or the changing of some ingredient of a prescription either for another drug or for some different preparation of the drug called for, is prevalent among unscrupulous druggists who make the accumulation of wealth their sole object in business, there can scarcely be a doubt. There is certainly a great temptation for this proceeding. Consider, for instance, the feelings of a druggist on the outskirts of a city, to whom prescriptions are a rarity, when one is presented calling for some extract or tincture, of a certain manufacture, which he has not in his stock. To say he cannot fill the prescription, is to lose the patronage of the family and the confidence of the physician. To ask them to wait, while he goes to the wholesale house for the preparation, is equally disastrous, for it means delay, to a patient probably to whom the immediate administration of the medicine is of vital importance, of from one to three hours. Here is a case where but few men could stand firmly for the right and see the dollars pour into the coffers of their rivals in the next block. We can almost forgive this; but for the substitution of any ingredient merely because it is cheaper, when the required drug is in the druggist's stock, there is no excuse, and such practices have done much to weaken the faith of physicians in those on whose integrity they must depend if they write prescriptions.

3. *To make sure of exhibiting pure and fresh drugs.* The physician can never be absolutely sure that this will be the case. Especially in prescribing pills will he be disappointed in the action of his medicines. In a paper read before the Michigan Surgical and Pathological Society, on Pill Medication, Dr. Ahlborn presented the notes of a series of experiments upon the solubility of pills taken at random from the shelves of a drug store, and said that the attempt to dissolve certain pills in a solution simulating the gastric juice was in some cases entirely unsuccessful, and in others a number of hours passed before solution of the pill was accomplished.

4. *To prevent refilling of prescriptions.* This especial point, which is one of the most important, has been so fully covered by Dr. Dakin in his interesting paper that I need not enlarge upon it.

5. *To show his disapproval of the practice of counter-prescribing and selling of patent medicines.* That counter-prescribing is largely practiced in our drug stores, one may ascertain by remaining for a very short time in one of them. People are constantly coming in with complaints that their heads ache, that they were out with the boys the night before and want something to straighten them up, or that they are constipated or have a diarrhœa, or a severe pain after eating. For every symptom the druggist has his dose, which he promptly produces. The alluring advertisements of the patent-medicine manufacturer are familiar to us all. Upon these products of "years of careful research" or "of a life-time spent in scientific study," there is no need to comment.

6. *To centre the pecuniary profits upon the physician.* Upon a first glance this reason may seem a mercenary one, but it really is not so. The true physician spends his life in relieving disease, and, while everyone rejoices at a promptly settled account, how many ledgers show accounts of carefully attended cases which the physician knew when he was first called would never bring him remuneration! Should he not therefore be the only member of the community to attend the sick and to give them medicine? It certainly does not seem penurious nor dishonorable to look at this side of the question in considering this matter.

7. *To insure cleanliness in the preparation of medicines.* This also is an important consideration. The handling of drugs by the unwashed hands of the drug-clerk might, although the possibility may be remote, be detrimental to the prescription. But this, to apply it to an individual case, is of no small consideration in lotions for the eye, calling for aqua destillat. How many druggists use distilled water? And of those that do, how many, should they happen to run short of it, would keep a prescription waiting until they could manufacture it?

8. *To educate the doctors to practical pharmacy.* Here is a subject closely related to medicine which, it seems to me, is too little understood by most physicians. The plea may be made that for this very reason they should not do their own dispensing; but the very fact that they intend to dispense their medicines would, to any conscientious physician, be an imperative reason for a thorough knowledge of pharmacy.

9. *To inspire confidence in the patient.* It is certainly true that many patients have more confidence in what may be the tincture of placebo left by the doctor than the medicine they receive when a prescription is taken to a drug store; and if this is true, would not that confidence be increased did they receive all their medicine from the physician's hands?

10. *To check the growing use of proprietary medicines by the profession.* This custom, which is so fashionable and convenient, is certainly a bad one. The proprietary medicines, whose name is legion, are manufactured by all chemists and many druggists. They are extensively prescribed, and, with the exception of one or two ingredients, the physician is often ignorant of their composition.

Certainly the reasons seem many in favor of my subject, and did time permit many more might be advanced.

46 Adams Ave. west, Detroit, Mich.

APHTHÆ.*

BY JOHN CROFT, M.D.

This being my initial effort in the writing of a medical paper, I will in consequence throw myself entirely upon the mercy of the gentlemen present; and though no doubt the criticisms will be many, my excuse is my lack of practical experience, having only practiced medicine for two years, and consequently in so limited a time my opportunities have been practically few and far between for observing the course of disease, as compared with the practice enjoyed by the large majority of gentlemen present. I have chosen stomatitis, as probably I have had ten cases of this disease to contend with as against one of any other malady. Probably this is due to the fact that my practice is almost wholly confined to the poorer classes, who, on account of their limited means, are unable or, as is often the case, utterly indifferent as to whether their surroundings are clean or otherwise—and generally the otherwise predominates.

I shall confine myself to the type ulcerous stomatitis; as the simple form, in the absence or decline of serious coexisting disease, may generally be made to disappear under mucilaginous and mild astringent lotions to relieve the catarrh, and a few doses of bromide of potash to relieve the fretfulness. (I have found borax and honey an excellent local application—one part borax to three parts fresh honey. A mild solution of alum is also, so I have found, a valuable topical remedy.) With the ulcerous type, however, I have not been so fortunate, this type naturally being more severe than the simple—the pain, fretfulness, etc., being greater. Also, unfortunately, the disease is not brought to the attention of the physician until it is aggravated in form, and

* Read before the Wayne County Medical Society, March 2, 1893.

the administration of suitable remedies is more difficult owing to the persistent opposition of the little patient. I have found this trouble far more prevalent amongst children who are bottle-fed, the preëxisting cause doubtless being the indigestible quality of the food employed, though in my opinion dirt, both personal and domiciliary, has as much to do with it as anything else. It frequently occurs, also, when the system is enfeebled by acute disease, as after the essential fevers. The treatment I have employed heretofore, and which I have found to be a most valuable remedy, is chlor. potash, often acting as a specific, besides having a valuable local action. I generally give about 3 grains every two hours, in the following prescription:

Chlor. pot., ʒ ss–j.
Mellis, ℥ ss.
Aquæ, ℥ ij.

M. One drachm every two hours.

I take care to let the solution run over the ulcerated part, so as to obtain the full benefit of the local action, at the same time removing the patient as far as possible from the preëxisting cause of the trouble, enforcing cleanliness, and advising change of residence where this is necessary and practicable. Iron is generally indicated.

As in most of my cases I have found chronic intestinal inflammation to exist, I have employed with good results the liq. ferri nitrat. with tinct. calumbo, administered in simple syrup.

Case 1.—Was called to see F. D——, æt. 8 months. Found patient suffering pain; fever 102°; pulse rapid; very fretful; the mucous membrane of the mouth and lips covered with ulcers, also the tongue; also found ulcers on both tonsils; breath fetid. The child absolutely refused nourishment, and, as the mother informed me, had lost weight rapidly. The child had practically weaned itself. The submaxillary glands were swollen, hard, and tender. The family lived in an apology for a house, stagnant water being almost continually under the house to the depth of one-half to two inches; both the child and surroundings were filthy. I prescribed the tinct. ferri chlor. internally, and used the chlor. pot. solution both internally and locally, but did not seem to make much headway until I persuaded the family to find a more congenial residence, which they at last did, and under the more healthful influence of which the child rapidly recovered, though the same remedies were continued.

In the majority of the cases, however, which I have treated, I have found the disease to yield readily to the use of chlor. potass., providing proper attention was paid to the original cause of the trouble, which in nine cases out of ten I attribute to dirt.

TERPENE HYDRATE IN BRONCHIAL CATARRH.

BY WILLIAM MURRELL, M.D.

I am desirous once more of calling attention to the value of terpene hydrate in the treatment of affections of the bronchial and nasal mucous membranes. Its properties have been well known for many years, but in this country it has never been a popular remedy, and its claims seem to have been overlooked in favor of pure terebene and other similar compounds. It is a hydrate of turpentine, and is made by treating oil of turpentine with nitric acid and alcohol. It is a solid, and has somewhat the appearance of chloral hydrate. Its odor, which is slight, resembles that of pure terebene. The great difficulty in the way of its administration is that it is practically insoluble in water. It is usually said to dissolve in alcohol in the proportion of 1 in 10, but many specimens are far less soluble. On the Continent, where it enjoys a high reputation in the treatment of bronchial affections, it is used as a popular remedy in the form of an elixir. For some months past I have prescribed it in a solution containing 5 grains to the half-ounce, made up with simple elixir and flavored either with tincture of Virginia prune and syrup of tar or with the aqua laurocerasi. For patients who cannot take sugar the elixir may he made with saccharine. Terpene not only relieves cough and lessens bronchial secretion, but is a diuretic, and has been used with advantage in neuralgia.

London, Eng.

Correspondence.

NEW YORK LETTER.

To be or Not to be, in Politics: Almost a Draw —How to Succeed in Gynæcological Plastic Surgery.

[Special Correspondence of the Medical Age.]

Probably one of the stormiest meetings the Academy of Medicine ever saw, occurred at that famous building on the evening of Feb. 24th. There were 144 members present, the number including most of the renowned professors and practitioners of the city. At the meeting previous to this one the Committee on National Quarantine had been discharged, and the object of this meeting was to reconsider the action. The members present were about equally divided as to whether or not the Academy should take any further action in regard to the quarantine question, or any other health affairs which were of a political nature. The proceedings of the meeting previous showed that a majority of the members present at that time wished the society to have nothing to do with quarantine affairs, hence discharged the committee which had been appointed to go to Washington and influence legislation in favor of a national quarantine as well as to appeal to various medical bodies to take action in the same direction.

Prof. A. L. Loomis, who had been a member of the committee, was opposed to a reappointment. The committee had done the work for which it was appointed, and had incorporated with its reports those of similar medical bodies in various parts of the country; and if these bodies had any further reports to make, the Academy as a society could accept them without the intervention of a committee. It was his opinion that if the profession of the city wished to influence national, State, or local legislation in any way, it should work through the County Medical Society, and thus the Academy members could keep their society free from political contamination. He said the Academy had always been, until the time of the recent quarantine excitement, purely a scientific body, and that if it wished to preserve its high prestige and recognized usefulness it must remain so; it was only because it had kept out of politics that it had attained its prominence and exerted its influence on the public. During his four years as president of the Academy, it had been attempted many times to bring up points of a political nature, but he had always prevented any action being taken upon them.

Dr. J. W. Roosevelt said he was in favor of the reappointment of the committee; that but a few members were present when the committee was discharged; that the daily papers of the city published the act as one of discourtesy to the men who formed the committee, and that it certainly was discourteous.

Drs. Janeway, Armstrong, Derby, Curtis, and others discussed the question. At last it was decided, on motion, that the President be instructed to reappoint the committee known as the National Quarantine Committee, filling the vacancies that might be caused by resignations, and that the Committee should take such further steps as in its judgment might lead to the establishment of a national quarantine.

The vote stood 77 in favor and 67 against the motion. It showed that nearly half of the members feared that the body was becoming too much entangled in public affairs.

The public has always looked to the Academy for guidance in things pertaining to health, and it has occasioned no little surprise to find that such a large proportion of the members of that body were opposed to taking any steps in regard to public health, when cholera has such brilliant prospects of gaining a foothold on our shores.

* * *

At a recent meeting of the County Medical Society, Dr. T. A. Emmet read a paper on "The Means of Success in Gynæcological Plastic Surgery." He said that while the laparotomy fad had developed many skillful abdominal surgeons in this country, the skill for plastic work had been much neglected. There is in this line both lack of dexterity in operating and lack of a perfect knowledge of what is to be accomplished by the operation, hence it is a natural conclusion that there are a large number of failures. It is his idea that only a single plastic operation should be

attempted at one sitting, and that many failures arise from doing two or more operations at once; when only a single operation is done, there is a much better chance of obtaining primary union, thus avoiding granulation tissue and cicatrices. He said the ætiology of the distressing symptoms occurring in lacerations of the pelvic floor was, a lack of support to the blood-vessels therein. This damage could be repaired, but the dash-board obstruction put up at the vaginal outlet by some operators is a failure. While he has never found difficulty in repairing any wound of the female genital organs which he met with that had been caused by the usual processes, he found much trouble in rectifying the results of poor surgery. He thinks much of his success has been due to the use of the silver-wire suture, which acts not only as a suture but as a splint, and he uses no other suture in plastic operations about the vagina.

In the discussion which followed, Prof. Mundé rather forcibly disagreed with the principal points brought out by Dr. Emmet. Dr. Mundé thought that the silver-wire suture was not always necessary or useful. He uses silk for operations on the anterior vaginal wall, and silkworm gut for the perineum. He also said that he had often saved women much time, pain, and expense by performing several operations at one sitting.

He offered the following elements as leading to his success in plastic operations upon the vagina: (1) Proper selection of cases; (2) proper selection of the time to operate; (3) proper preparation of the parts; (4) perfect asepsis, but the avoidance of strong germicides; (5) rest, and early movement of the bowels.

New York City, March, 1893.

WAYNE COUNTY MEDICAL SOCIETY.

At the meeting of the Wayne County Medical Society held Dec. 1, 1892, Dr. K. Gunsolus read a paper entitled "Uterine Hæmorrhage."*

*The original papers, the discussion of which we include in this report, will the published in a subsequent issue of the AGE.

DISCUSSION.

Dr. J. F. Chmellicek: Have seen the repair made a number of times in this laceration.

Dr. R. Murphy cited the cases of three sisters that always had post-partum hæmorrhage, in some twelve deliveries that he had attended them in.

Dr. L. E. Maire: I believe that hæmorrhage is brought on by the early extraction of the placenta, and think it better to let it remain *in situ* for some twenty minutes.

Dr. Scurr holds hand over fundus of uterus after the contents are removed, some ten minutes or more. He reported a case of uterine hæmorrhage following an abortion.

Dr. W. D. MacQuisten reported a case where, after the child was born, there was a large amount of hæmorrhage, which was controlled by the removal of the placenta and application of hot water.

Dr. A. C. Heggie believed with Dr. Maire that the placenta was removed too soon.

Dr. S. Bell graphically described two cases of post-partum hæmorrhage that he lost. Believed in the external manipulations, acids, and hot water internally.

Dr. C. Henri Leonard: Have seen six cases of puerperal hæmorrhage, with two fatalities, before delivery, and with good medical men in attendance.

Dr. Hal C. Wyman reported a case of hæmorrhage following childbirth, where the patient had hæmorrhage occurring spontaneously every few days for some ten days. Each attack would seem almost fatal, and would cease on the arrival of the doctor. With the application of ice to the mouth of uterus the hæmorrhage was controlled.

Dr. E. B. Smith: When we remember the histology of the uterus and the physiological action of ergot, I do not think we will use it at childbirth, except where urgently required in post-partum hæmorrhage.

Dr. J. F. McPherson: I think acids are good in post-partum hæmorrhage, and the curette with the double or recurrent douche in hæmorrhage due to retained placenta.

Dr. K. Gunsolus: Yes, acids are good. I do not give ergot to the parturient woman, and do not like it.

At the meeting of the Society on Dec.

15, 1892, Dr. MacQuisten read a paper on "Pneumonia."

DISCUSSION.

Dr. L. E. Maire: Do not like poultices, but prefer the application of chloroform and alcohol, 4 parts to 12, sprinkling flannel with this solution, with several layers of flannel over this, and all covered with oiled silk. The heart must be watched, and not so much attention paid to the respiration.

Dr. R. Murphy: I depend on quinine sulphate in high temperature, with alcohol as a stimulant. Do not like aconite, as it depresses the heart. Make a flaxseed poultice, sprinkling mustard over all; this applied to chest makes a sufficient counter-irritation and helps relieve the congestion.

Dr. Thomas Henderson cited authors with their results, which did not show much preference as to results in favor of any line of treatment. Believes in alcohol as a stimulant. Thinks that in the Doctor's case his patient had a relapse, with invasion of more lung tissue. Does not like poultices in private houses; in hospitals it might do. Thinks we give too much medicine.

Dr. Samuel Bell: Death comes on from plugging of some of the arteries. The mechanical action and the poisons act together, and this brings death. Recent investigations by Fraenkel, Friedländer, and Sternberg, with many other eminent experimenters, find in pneumonia an infectious disease, the primary and exciting cause being a specific micro-organism. According to recent writers, the diplococci pneumoniæ of Fraenkel were found in 90 per cent. of all cases. During the last year there occurred in my practice four cases of lobar pneumonia in one family in three weeks, two of which were fatal, the father and son. In cases which I have examined after death from pneumonia. I have found the right ventricle distended and filled with blood. Death results primarily from impairment of the inhibitory power of the vagus. The power of the heart to expel its contents becomes lessened, in many cases there being a gradual decline of this power, while in others the cardiac failure is more abrupt.

Dr. Hal C. Wyman: I believe in the micro-organism theory. If I can sustain and carry my patients along so as to stand the respiration of 40 or so a minute, I can cure them. Where the respiration is frequent, have had good results from forced cold air, carried to the patient from an improvised apparatus. This sustains the heart, and helps hold up or carry on the respiration. I give alcohol, 76 per cent., with ammonii carb., in milk or water.

Dr. D. O. Donovan: The cold air could not be forced where the lung was indurated. I give spir. vini Gal. always. The iodide of potassium will sometimes give just such symptoms as the Doctor describes.

Dr. J. R. Kestell: I try to follow out the treatment as laid down by the late Dr. Sir Morell Mackenzie.

Dr. O. S. Armstrong thinks we can do much for pneumonia, and applies poultices; gives antimony, pulv. Doverii et quinia. Has used oxygen and likes it. Gives alcohol, brandy, and champagne, commencing in the first stages.

Dr. K. Gunsolus: Veratrum viride is a drug I have used, and like it as made from the green tincture, which I give in 1-, 2-, 3-, 4-, and 5-grain doses till the pulse is lowered. The vomiting that it produces is of itself a safety-valve. Alcohol or spiritus, not as a food but as a stimulant, is what I use.

E. B. SMITH, M.D.,
Secretary.

A CARD FROM MESSRS. JOHNSON & JOHNSON.

To the Editor of the MEDICAL AGE:

DEAR SIR—On page 80 of your issue of the 15th February is an article headed "Honest Excerpts," in which we are placed before your readers in a most unfavorable light. We are charged with having garbled the utterances of Mr. F. A. Thompson and "grossly misrepresenting" his statement.

Permit us to state that we prepared for distribution among the members of the medical profession, a pamphlet relating to our product "Papoid."

This pamphlet contained a number of quotations from recent literature. We quoted Mr. Thompson as having said: "The ferment of *Carica Papaya* (Papoid) has a proteolyte action on proteids in alkaline, acid, or neu-

tral media." The word Papoid was inserted by us, the only mistake being that parentheses were used instead of brackets, a mistake for which our printer is responsible.

We felt justified in inserting the word Papoid and for two reasons:

1st: Because Papoid was the title of Mr. Thompson's article.

2nd: Because Mr. Thompson *must* have referred to Papoid, or else his statement is not a chemical truth. We greatly regret having quoted Mr. Thompson at all, especially since our every claim regarding the chemical action of Papoid has been fully substantiated by the exhaustive report of Prof. R. H. Chittenden of the Sheffield Scientific School of Yale.

We have no desire to enter into a conflict on paper. We feel that we have earned a reputation for honest dealing, and beg to announce that we are prepared at all times to demonstrate the absolute truth of all claims made by us regarding our product Papoid.* Respectfully yours,

JOHNSON & JOHNSON.

New York, Feb. 27, 1893.

THERAPEUTICS AT THE PAN-AMERICAN MEDICAL CONGRESS.

To the Editor of the MEDICAL AGE:

DEAR SIR—It is the earnest desire of the officers of the Section on Therapeutics of the Pan-American Medical Congress that both specialists and general practitioners should contribute articles to its proceedings.

Gentlemen who desire to read papers at this meeting should notify the undersigned at once of their intention, and should send him by July 10th at the latest an abstract of their paper, in order that it may be translated into the three official languages of the Congress and published in the programme. The importance of this Section, and the interesting papers which have already been promised, give assurance of a very successful meeting. H. A. HARE,

President of Section.

Philadelphia, March 23, 1893.

*Mr. Thompson, having previously discussed this subject at considerable length in an article in the Bulletin of Pharmacy, October, 1892, reproduced in the MEDICAL AGE of Feb. 10th, desires to rest his side of the discussion on the evidence already advanced.—EDITOR AGE.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., MARCH 25, 1893.

Editorial.

ANNOUNCEMENT FROM DEPARTMENT OF PHYSIOLOGICAL REMEDIES, OF PARKE, DAVIS & CO.

We learn with much interest that Messrs. Parke, Davis & Co., of Detroit, Mich., have undertaken the manufacture of some of the newer physiological remedies. They are now prepared to supply desiccated thyroids and cerebrin, and expect to extend this list materially. The following announcement is made by this enterprising firm:

* *
*

As a result of the well known investigations of Dr. Brown-Sequard and other eminent therapeutists, the materia medica has recently been largely extended by resorting to the use of products representative of certain glands or tissues of the animal economy. As we have always made the manufacture of digestive ferments a specialty, and enjoy every facility for the preparation of products of this character, we are undertaking to supply some of these newer remedies, of which we now have ready Desiccated Thyroids and Cerebrin.

Desiccated thyroids are in the form of impalpable powder representing in permanent form the thyroid glands of sheep. This product is of such strength that 15 grains represent one gland of the average size. Desiccated thyroids are highly recommended in the treatment of myxœdema.

Cerebrin is prepared after the formula of Dr. William A. Hammond, and is put up in glass-stoppered ounce vials. While Dr. Hammond has recommended maceration of the brains for six months, we have modified his method in such manner that we are enabled to thoroughly extract the crude material in as many days.

One serious drawback to the use of these products has been the difficulty in getting the necessary crude material, and the disagreeable character of the work involved in their preparation.

Again, it is only by the most scrupulous attention to the minutest details that asepsis in the finished article can be secured and assured.

The well known reputation of our house is a guarantee of our ability and intention to fulfill every requisite. We do not doubt that many interesting results will follow the treatment of myxœdema by desiccated thyroids.

It is our purpose to extend this list from time to time. Descriptive literature of those announced will be supplied on application.

PARKE, DAVIS & CO.

EXPERIMENTAL RESEARCHES ON THE POISONS OF CHOLERA.

The pathogeny of infectious diseases is to-day reduced in last analysis to the toxic action of the products of microbes. There was first a disposition to refer these diseases to the presence in the organism of ptomaines due to the decomposition of animal matters by microbes. But the researches made on diphtheria and tetanus, diseases in which the bacilli have a quite special localization, have proved that the latter secrete products capable of rendering what Claude Bernard happily calls the "interior environment" unfit for the life of the animal. The toxines of the bacilli of diphtheria, of tuberculosis, and of tetanus have been studied, and M. Metchnikoff has of late made some investigations on the effects of the toxine of the cocco-bacillus which produces hog-cholera (the pneumo-enteritis of the hog). The results obtained have enabled him to penetrate more deeply into the problem of immunity and of the microbicide forces of the organism.

Gamaleïa has of late taken for his special subject the study of the cholera vibrio. His numerous researches made since 1888 have shown him that the bacteria are toxic, not by their products of secretion, but by their own bodies. He ranges the microbian poisons in two great classes, differing by their chemical products and by their toxic properties: the nucleins and the nucleo-albumins.

He claims to have found the two principal cholera poisons—the primary poison and the modified poison. The first, which he considers a nucleo-albumin, has the property of provoking a systemic intoxication exceedingly like Asiatic cholera in its manifestations. In hares this intoxication manifests itself by a prolonged and violent diarrhœa. In dogs, vomiting lasting several hours predominates. In all the cases it has determined a violent inflammation of the gastro-intestinal tube.*

Gamaleïa asks: What is the mode of action of this poison? By some of its reactions, it resembles the soluble ferments. We know also that the cholera vibrio may produce various diastases. It may be asked if it is not these diastases which are toxic in the cultures of cholera? The choleraic stools have been thought to be the result of a hypersecretion of the intestinal glands under the influence of a toxic diastase. In studying the toxic action of the cultures of different microbe-producers of diastases, he has in fact found that they have as a common character a certain diarrhœaic action. Even certain samples of pancreatin in his experiments have produced diarrhœa in hares. Further experiments, however, on the soluble ferments have convinced him that the cholera poison does not belong to this class, but to that of nucleins, which Bachner has denominated proteins or alkali-albumins.

The researches on the poison of cholera made by Nicati and Rietsch, Pouchet, Klebs, and Brieger, leave no doubt as to the existence of ptomaines in the organs of cholera patients as well as in the cultures of the specific bacillus. But among these ptomaines some are little toxic and others in too small quantity to account for the symptoms of cholera poisoning. On the other hand, the discovery of divers alkaloids—the toxalbumin of Brieger and Fränkel, the toxopeptone of Petri—has not revealed the real alkaloid which produces the disease. Gamaleïa must be credited with the discovery of the sole poison whose inoculation reproduces the diarrhœa of cholera with its symptomatic *cortege;* this he has isolated from the cadavers of the cholera vibrio.

All the cultures were made in bouillon pre-

*Gamaleïa, The Bacterial Poisons, p. 139.

pared of calves' feet, and sterilized half an hour by a heat of 120° C. The liquid thus obtained is toxic to a great number of animals, and in particular to tuberculous guinea-pigs. The toxicity of these sterilized cultures augments during two or three weeks; this fact is due, according to Gamaleïa, to progressive solution, in the liquid, of the poison contained in the cadavers of the microbes. This latter kills the animals without giving them the diarrhœa. It is precipitated by alcohol, acetic acid, and by acetate of lead. It is not destroyed by heating an hour at 120° C. The toxine of the Metchnikoff vibrio, of the diphtheritic bacillus, and Koch's tuberculin resemble it not only by their source and their chemical reactions, but also by their property of provoking in tuberculous animals the general and local reaction.

As the cholera nuclein does not sufficiently account for all the symptoms of the disease, Gamaleïa suspected that the real poison was destroyed by ebullition, and he substituted discontinuous heat at 55° to 60° C. He thus obtained a diarrhœic poison which belongs to the class of nucleo-albumins, and of which the nuclein is but a product of decomposition. This typical poison of cholera is very unstable; it is destroyed by a heat above 60° C.

The nucleo-albumins and the nucleins do not act through the intestinal walls; which fact seems to confirm the view of Gamaleïa that the comma bacillus must penetrate the tissue of the intestine to produce the symptoms of Asiatic cholera.

In the preparation of this brief article, which may be regarded as representing the latest researches on the pathogeny of cholera, we are chiefly indebted to the valuable little work soon to be issued in Mr. Davis' Leisure Library Series, entitled "Bacterial Poisons;" also to a concise summary by Brodier, to be found in the Médicine Moderne, June 30, 1892.

HEART FAILURE.

Professor Alfred L. Loomis, M.D., LL.D., read before the American Climatological Association a paper on heart failure.

In the International Medical Magazine for February, 1893, he reports seven cases, and his deductions from these are especially interesting in view of the fact that both physicians and the public have come to regard this term "heart failure" as a hackneyed expression for the cause of death when the actual cause cannot be ascertained.

Dr. Loomis states that an analysis of the cases of which he has given abstracts makes it evident that fatal heart-failure is rarely so sudden as we are accustomed to regard it; and if such cases are carefully studied, and all the symptoms properly appreciated, its occurrence in most instances can be prognosticated with a great degree of certainty, and in many instances it may be averted. It seems safe to assume that heart failure is impossible so long as the heart cavities are of normal size, the heart muscle of normal integrity, and the cardiac innervation not seriously disturbed, the function of the trophic nerves being normal. So long as full nutrition is maintained in the cardiac walls, the heart meets every obstacle with added force; and only when the contractility of its walls is weakened do we find that nature's pathological efforts have been put forth to end in that evidence of exhausted vitality—cardiac insufficiency.

He therefore includes all heart failures in three classes:

First: Those in which the heart has for a long time been called upon to perform an abnormal amount of work, as in valvular or arterial disease.

Second: Those in which obstructive changes in the coronary vessels markedly diminish the nutritive supply of the cardiac muscle.

Third: Those in which toxic influences act directly upon the nutrition of the cardiac muscle, or so interfere with the cardiac nerve-supply as to lessen cardiac resistance.

He concludes with this excellent advice, in his summary of his conclusions, as to the lessons taught by the facts demonstrated. He says:

However we may explain it, clinical observation teaches that some chronic, and many acute, infections so diminish heart power that sudden heart-failure occurs in hearts that previous to this infection were of normal integrity. It then becomes of the utmost importance, in all toxic conditions,

to watch for the first indications of cardiac weakness. On this principle Stokes based his great rule for the use of alcoholic stimulants in the treatment of typhoid fever, when he directed, "that in every case of fever, if the first sound of the heart became indistinct, stimulants should immediately be given in sufficient quantities to restore the heart tone." It is on this principle, also, that strychnia upholds an alcoholic heart in pneumonia, by restoring or increasing its nerve supply. A rule which for a long time has governed me in all toxic conditions is, not to wait for signs of commencing heart-failure, but to begin the administration of alcohol, strychnia, and other heart tonics early, and thus, if possible, save my patients from fatal heart-failure.

A review of the cases which I have presented makes it evident that the term heart-failure is misleading and should be abandoned, for in most instances it does not express the pathological state. It is equally evident that the term "death by heart failure" is often used to cover the ignorance of the medical attendants.

THE PREVENTION OF INFLUENZA.

It would appear, from home and foreign reports, that although there have been many cases of influenza reported, the cases have been far less severe than those in the epinemics which have in previous years proved so devastating.

Influenza, as is well known, produces death more often through one of its complications than directly by the severity of the fever itself; in particular it leads to death through bronchitis and other diseases of the respiratory organs.

While, therefore, there is no ground at all for panic, there is every reason to take all practicable precautions. The experience of the last few years has convinced medical opinion that influenza is transmitted by personal contagion from the sick or convalescent to the healthy, and doubtless the precautions which we use against scarlet fever and other diseases of the same class would be effectual against influenza also; owing, however, partly to the mildness of the affection in many cases, it is hardly practical to propose to enforce isolation.

Persons who, from their age or their liability to bronchial attacks, are likely to suffer severely from influenza, should be guarded with special care from contact with patients suffering or who have recently suffered from the disease; in the same way, in public institutions where many people live or work together under the same roof, special pains should be taken to recognize and isolate the first cases which occur.

Experience appears to show that in asylums and orphanages attention to this may prevent the intrusion of the epidemic altogether, as the earliest cases have almost always occurred among the attendants or others who are living outside the institution or are allowed to leave it for short periods. The same applies to large households. The ventilation and cleansing of buildings in which persons are collected together ought also to receive special attention at the present time.

Further, much may be done by attending to personal hygiene; there is no disease against which the *mens sana in corpore sano* is a better protection. Finally, it ought to be generally recognized that nothing is more ill-judged than to attempt to "fight against" the disease. A person in fair health, and not at the extreme of life, who consents at the beginning to lie up and avoid exertion and exposure to cold, will almost always get off with an attack slight in its symptoms and of short duration. There is a complete agreement among medical men that over-exertion and fatigue have a most injurious influence, often appearing to determine the onset of an attack which might otherwise have been escaped, and to render the disease itself severe.

THE BACTERIOLOGY OF MALARIA.

Dr. Julius Mannaberg, in a paper read before the Society of Physicians at Vienna (Allgemeine Wiener Medicinische Zeitung, Zw. 5, 1893), reports the results of his investigation of the subject of the ætiology of malaria.

He divides the micro-organisms connected with malaria into two groups: (1) Parasites

with direct sporulation, without syzygies; and (2) Parasites with direct sporulation and with syzygies. In the first group he places the micro-organisms connected with the quartan and tertian varieties of the disease; in the second the pigmented and unpigmented organisms found in the blood of patients suffering from quotidian ague, and also those described as occurring in the malignant forms of tertian ague.

Dr. Mannaberg had observed the latter variety before Marchiafava and Bignami described them, and corroborates these observers in every detail, both as regards the appearance of the parasites and the nature of the disease produced by them.

Dr. Mannaberg further demonstrated, by means of special illumination, that the younger forms of all organisms are not found in the corpuscles, as Marchiafava and Celli maintained, but, as Laveran had previously shown, are to be seen adhering to the outside of the red corpuscles. As regards the semilunar bodies in the blood of malarial patients, which have been described by several observers, Dr. Mannaberg states that in forty-three cases of "summer fever" (due to infection by the organisms contained in his second group) he found them thirty-seven times.

He considers that these semilunes are formed by the coalition of two to four amœboid bodies, and states that he has been frequently able to demonstrate the approach of such bodies to each other and the subsequent appearance of a semilune.

Dr. Mannaberg opposed Laveran's views that the semilunar bodies were the result of the cachexia produced by malarial poison, for he had never seen them in the blood of patients suffering from the forms of disease produced by organisms of his first group when the ague had lasted for a very considerable period, but had frequently found them within the first few days of the fever in the blood of patients suffering from the more severe forms (second group) of malarial poisoning, but in which cachexia was not marked.

Finally he considers the treatment of malaria by quinine, and maintains that the organisms are destroyed and rendered inert by the action of this drug.

Book Notices.

THE HOME-MAKER FOR MARCH.

Every admirer of the beautiful in art should take advantage of the splendid offer made by The Home-Maker magazine, which is giving a coupon to its readers that will enable them to secure "A Yard of Chrysanthemums" and a magnificent photochrome of Tennyson, Bryant, Whittier, or Longfellow, all beautiful reproductions in three tints, and all well fitted to grace the walls of any home. This coupon is printed in the magazine. The Home-Maker magazine is steadily attaining an enormous circulation, due to its excellent articles, its superb illustrations, and, above all, its untiring efforts to secure matter of interest to every class of readers. People have discovered that they find everything, both practical and intellectual, in The Home-Maker magazine for $2 a year, and this is the reason why The Home-Maker is becoming one of the most popular and widely circulated magazines in this country. Its recent growth has been phenomenal.

The contents of this magazine for March are as follows: Inauguration of the Presidents, by Rev. M. J. Cramer, D.D.; Lights and Shadows of Island Life, by Sidney Morien; Notes of a Short Trip Abroad—London and the Isle of Wight—by Jenny June; March (poem), by Mary F. Butts; Augusta Förster, the Poor Girls' Friend, by S. P. Lewis; The Fall of Jason (continued), by Willis George Emerson; Encouragement (poem), by J. W. Schwartz; Homes in Persia, by George Donaldson; Allegro Appasionato, by Maud Rittenhouse; A Colonial Belle, by Caroline Hicks; Ancient Spanish Lyric (poem), by W. M. Vanborder; The Empty Nest (poem), by Ninette M. Lowater; Up Hill (continued), by Emma M. Connelly; A March Day (poem), by C. H. Chase; Topics of the Time, by Helen Leah Reed; The Garden, by George Ethelbert Walsh. *Decorative Home Art:* The Russian Lounge, by Annie Winslow Cram. *With the Housewife:* Danish Home Life, by Sarah Kilham; New and Dainty Modes of Cooking Oysters, by Katherine B. Johnson. Chats with My Girl Friends, by Mrs. George A. Paull; Absent (poem), by St. George Best; Homes and

Home-Building, by Frank P. Allen; Health Hints, by Susanna W. Dodds, M.D.; At the Fancy Ball (poem), by Cora E. Bostwick. The Library; Notes of Various Interest; Fashions; Slumber Town (poem), by Kev. D. R. Herrick.

CONTENTS OF SCRIBNER'S FOR MARCH, 1893.

March. Frontispiece. Engraved from nature. By W. B. Closson.

Audubon's Story of His Youth. By Maria R. Audubon. Introduction—"Myself;" by J. J. Audubon. With portraits after F. Cruickshank, J. W. Audubon, and others; and drawings by O. H. Bacher and W. J. Baer; engraving by T. A. Butler.

The Jaffa and Jerusalem Railway. By Selah Merrill. Drawings by Irving R. Wiles, O. H. Bacher, and V. Pérard, after photographs by the author.

The One I Knew the Best of All: A Memory of the Mind of a Child. By Frances Hodgson Burnett. Chapters VIII–X. (Begun in January—to be continued.)

A Saharan Caravan. By A. F. Jaccaci. Drawings by A. F. Jaccaci; engraving by Putnam, Chadwick, Dana, and Bodenstab.

The Man in Red. By T. R. Sullivan.

The French Symbolists. By Aline Gorren.

The Violin. By Harriet Prescott Spofford. Drawing by Robert Reid.

The Cedars. Drawn by C. P. Cranch. Engraved by Frederick Juengling.

The Work of the Andover House in Boston. By William Jewett Tucker. [The eighth article in the series on "The Poor in Great Cities."] With sketches among Boston institutions and the Boston poor, by Walter Shirlaw and others; engraving by Witte, C. I. Butler, and E. Del'Orme.

The Tale of a Goblin Horse. By Charles C. Nott.

Ezra Hardman, M.A. By Schuyler Shelton.

Wood Songs—III. By Arthur Sherburne Hardy.

Historic Moments: The Death of John Quincy Adams in the Capitol. By Robert C. Winthrop.

The Point of View: Reading and Authorship—Dickens as a Man of Feeling—The Roaming Fashion in Literature—"The Cedars."

HANDBOOK OF INSANITY: For Practitioners and Students. By Dr. Theodore Kirchhoff, Physician to the Schleswig Insane Asylum, and Privatdocent at the University of Kiel. Illustrated with eleven plates. Octavo, 362 pages. Price elegantly bound in maroon parchment muslin $2.75; in flexible leather, gilt top, $3.50.

William Wood & Co. announce that they propose to publish from time to time volumes of special interest to practicing physicians, under the general title of The Medical Practitioners' Library. These will vary in thickness from 100 pages upward, and correspondingly in price. A peculiar size has been adopted for the books of this series to make them easy and convenient for handling not burdensome to hold while reading. The type is large and handsome. They will be bound in extra muslin and in flexible morocco, the latter with round corners. The volumes are sold separately. The series is inaugurated by this work of Dr. Kirchhoff.

Judged by the standard of the first number of the series prospected, the publishers are to be congratulated on bringing out books of this character and in such attractive form.

The volume before us is divided into two parts: the first The General Part; the second The Special Part. The first contains: The Anatomical Basis and the Location of Mental Disturbances; Classification, Importance and Mode of Action of the Causes of Insanity; The Signs of Mental Disorders; The Course of Mental Disorders; The Diagnosis of Mental Disorders and their Border Lines; The Treatment of Insanity; The History of Insanity.

The second part considers: The Classification of Insanity; Simple Mental Disorders; Mental Disorders Associated with Permanent Anatomical Changes in the Brain or with General Diseases.

The book is well arranged, though it might have been more thoroughly indexed for reference. It is a modern and thorough presentation of the existing knowledge of this department of practice.

CONTENTS OF THE NATIONAL POPULAR REVIEW FOR MARCH.

Frontispiece: The City of San Diego and Colorado Beach.

Questions of the Day.—The Stomach and

yspepsia, or the Lady and the Tiger: Rondino. Relation of Insanity to our Civil rganization: Inglis. The Chief of the andits of Europe: Darmesteter. Quarannes: Laine.

Editor's Table.—Soldiers' Pensions and ıe Pension Bureau—Why Has the United tates Such a Large Pension List? The ate Jay Gould; Physicians' Reputations; lustration; Poor Literature; Invalid Pensons and Politics; Frivolous Fashion; egetarianism as an Exclusive Diet; Foreign ealth Resorts.

Popular Sanitation and Medical Excerpts. -Hygiene of the Voice—Part III: Rumbold. lass and Tack Eating: Marks. Neuralgia f the Toe. Some Horrors of Quackery.

The Home and the Nursery.—Glue not elatin, a Warning to Housekeepers; The eeth; How Should Mothers Punish? Spongg out a Headache; What is it that Pulls Person Down? Mosquito Prevention; Children May Get a Disease by Imitation; Why, f Course.

Historical Recollections and Bric-a-Brac. -The City of San Diego and Colorado Beach; Victim to Professional Duty; A New hing in Spiritualism.

ANDBOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE, AND NASO-PHARYNX. By Carl Seiler, M.D., Instructor in Laryngology and Lecturer on Diseases of the Upper Air-Passages, in the University of Pennsylvania, etc. Fourth Edition, thoroughly revised and greatly enlarged. Illustrated with two lithographic plates and 107 engravings. 12mo; pp. 414; cloth, $2.25. Philadelphia: Lea Brothers & Co.

The popularity of Dr. Seiler's book is ıanifested in that this volume is the fourth dition.

Many additions have been made to it, mong which are entirely new chapters on ıfluenza and American Grippe; on Intraasal Neoplasms; a Description of Uterine)isease and its Effect upon the Mucous lembrane of the Upper Air-Passages in roducing Chronic Inflammation; and Intranasal Disease as a Cause of Acne of the ace and Neck.

The number of illustrations has also een added to by six new and original engravings on wood, which serve to well supplement the colored plates and old engravings, and prove of material assistance in communicating the lessons of the text.

The publisher has done his part tastefully and in a workmanlike manner, which makes the book easy and interesting to read and convenient for reference. It is well indexed and truly *multum in parvo;* its 412 pages are ripe and fruitful in modern instruction for the relief of the diseases discussed.

INTERNATIONAL CLINICS: A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynæcology, Ophthalmology, Laryngology, Otology, and Dermatology. By Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada. Volume IV. Second Series, 1893. Published by the J. B. Lippincott Company, Philadelphia. 1893.

Among contributors to Volume IV are the following: Robert Abbe, M.D., J. M. Anders, M.D., John Ashhurst, Jr., M.D., William Easterly Ashton, M.D., I. E. Atkinson, M.D., Dr. Balzer, Norman Bridge, A.M., M.D., John H. Brinton, M.D., John Syer Bristowe, M.D., LL.D., F.R.C.P.L., F.R.S., George Carpenter, M.D., M.R.C.P., Charles Gray, M.D., Henry C. Coe, M.D., M.R.C.S., C. L. Dana, M.D., I. N. Danforth, A.M., M.D., Edward P. David, A.M., M.D., Louis A. Duhring, M.D., Arpad G. Gerster, M.D., V. P. Gibney, M.D., G. A. Gibson, M.D., D.Sc., F.R.C.P., Rickman John Godlee, M.S., F.R.C.S., Landon Carter Gray, M.D., Professor Felix Guyon, M.D., W. B. Hadden, M.D., F.R.C.P., John B. Hamilton, M.D., LL.D., Graeme M. Hammond, M.D., Warrington Haward, M.D., F.R.S.C., Christopher Heath, E. Fletcher Ingals, A.M., M.D., W. W. Keen, M.D., LL.D., Frederick I. Knight, M.D., G. M. Lefferts, M.D., Alfred L. Loomis, M.D., Matthew D. Mann, A.M., M.D., Thomas J. Mays, M.D., William Oliver Moore, M.D., H. H. Mudd, M.D., Paul F. Mundé, M.D., Charles B. Nancrede, M.D., A. H. Ohmann-Dumesnil, M.D., Roswell Park, M.D., William Pepper, M.D., LL.D., Thomas R. Pooley, M.D., William Henry Porter, M.D., James J. Putnam, M.D., James W. Putnam, M.D., Beverley Robinson, M.D., Amand Routh, M.D., B.S., Alexander J. C.

Skene, M.D., Charles G. Stockton, M.D., James Tyson, M.D., Francis Sedgwick Watson, M.D., Henry R Wharton, A.M., M.D.

This number is replete with scholarly articles. It is prefaced with an excellent and lifelike black-and-white engraving of the late Prof. Henry Ingersoll Bowditch, and a complete sketch by Dr. Frederick I. Knight of the life and achievements of this distinguished physician whose loss is so generally and sincerely mourned.

History of the Life of D. Hayes Agnew, M.D., LL.D. By J. Howe Adams, M.D. With fourteen full-page portraits and other illustrations. In one large royal octavo volume, 370 pages. Extra cloth, beveled edges, $2.50 net; half-morocco, gilt top, $3.50 net. Sold only by subscription. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry St.

The story of the life of this most revered, most distinguished, and most lamented surgeon has been charmingly, tastefully, and chastely told by the author.

It contains several fine portraits of Dr. Agnew at different periods of his life, and portrays faithfully the life, the character, and the accomplishments of this grandest figure in American medicine.

It will doubtless be treasured by his host of friends and admirers as a record of his work and of the magnificent example he has set his followers of an ideal, original, and universally loved surgeon and friend.

The publishers have framed this tribute to America's great surgeon in appropriate form, printing it with wide margins, on superior paper, from well proportioned and clear-cut type, and binding it between simple and tasty covers.

It will doubtless find a place in the libraries of all of the many eminent men who knew him in his social and professional life and esteemed his grand qualities and great achievements.

Contents of Food for March.

Medico-Legal Importance of Ptomaines, by A. C. Farquharson, M.D., D.P.H. Camb.

The Cause and Cure of Obesity, by George H. Rohé, M.D.

Diet and Hygiene of Old Age, by t
Editor.

Infant Feeding and the Hygiene of t
New-Born, by Prof. Tarnier.

A Clinical Discussion of Two Cases
Diabetes Mellitus, by J. M. Anders, A.M
M.D.

On the Feeding of Infants with Dilut
Milk.

The Selection, Preparation, and Servi
of Food to the Insane, by H. A. Tomlinso
M.D.

The Doctor's Easy Chair.

The Doctor's Mirror and Retrospect.

The Doctor's Library.

This journal of the Clover Publishing C
of New York fills a rôle that no other h
yet attempted. It is a journal of hygie
and nutrition. It covers also alimentati
balneology, climatology, dietetics, therape
tics, sanitation, kinesipathy, gastronomy.
is an inviting menu it has set before its rea
ers for March.

The Year-Book of Treatment for 1893. Critical Review for Practitioners of Medici and Surgery. A Series of Contributions Twenty-two Writers. In one 12mo volume 500 pages. Cloth, $1.50. Philadelphia: L Brothers & Co. 1893.

To keep apprised of all important advanc is a binding obligation, but it cannot be f filled by individual reading. Even if it we thus possible for one mind to scan the v accessions to medical literature, it could n pass critical judgment upon the claimed a vances in more than a few of the many spec subjects essential to a thorough equipme In The Year-Book of Treatment this doub function is performed by a corps of acknow edged leaders, covering in their joint survey branches of medicine, and qualified to sele and present the real progress of the twelv month. The result of their labors is o value so widely recognized that the dema for this work renders possible its present tion at a price within the reach of all. contents are carefully classified and indexe and full references to original sources giv for the beneft of those desiring to ma further research. It would be difficult t imagine a book more closely suited to t needs of the medical practitioner or writer

Notes and News.

'ie Proposed New Wing for the University Hospital.—

It is probably not generally known that ie original plan of the University Hospital]s never been realized on account of lack (funds. Since its erection it has been kept (nstantly filled with patients from all parts (the State and country. At present, al- tough every available space is utilized to its illest extent, the hospital still lacks accom- odations for the large number of applicants 10 are constantly seeking treatment here. It is proposed, therefore, to build an addi- onal wing, which will complete the original an of the hospital. To this end a bill has]en brought before the State Legislature king for an appropriation. Although the nical teaching of the University has been cond to none in the country, the necessity r extending this department of medical in- ruction is keenly felt by the faculty as well ; the students. The Medical Department (the University now has in attendance a rger number of students than has ever sembled at any medical school in this untry; and, as a result, the increased de- ands made upon the clinical resources are cessarily met with difficulty. We conceive at no more worthy charity is to be found this country, for, in addition to being one the most active in the work of a great neral hospital, the University stands in the nt in the amount of and facilities for work all the special departments of medicine. st, but not least in importance, from this urce nearly 850 medical students must re- ive their instruction. Who can estimate e comfort and the number of lives that ll depend upon the knowledge and skill ich they will acquire here?

Owing to the facilities which the Univer- y Hospital possesses for treating special ses, a considerable number of patients ffering from the gravest medical and sur- cal affections are brought here. As these cilities are maintained at an expense con- derably increased above that of a general spital, a deficit has been incurred yearly spite of the most judicious management.

A large number of the patients treated are from the State of Pennsylvania, no less than 512 having been received into the hospital from the counties of Pennsylvania outside of Philadelphia in the last year. It has always been the policy of the hospital to receive, without charge, any accident cases happening in the State, when application is made within twenty-four hours.

It is hoped that University graduates throughout the State, and all who are in sympathy with the good work which the University of Pennsylvania is doing, will feel a personal interest in the bill, which has been introduced at Harrisburg for the purpose above mentioned, and will use what influence they may have toward securing its favorable consideration.—*University Medical Magazine.*

New By-laws of the Pan-American Congress.—

Languages: By-law IX. Papers may be read in any language, providing that authors of the same shall furnish the Secretary-General with an abstract, not exceeding 600 words in length, in either of the official languages (English, Spanish, French, or Portuguese), by not later that July 10, 1893; and providing, further, that a copy of each such paper shall be furnished in either of the official languages, at or before the time of the meeting, to the secretary of the Section before which the same shall be read. Remarks upon papers may be made in any language, providing that members making such remarks shall furnish a copy of the same in either of the official languages before the adjournment of the session. *Publication:* By-law X. All papers read, either in full or by title, shall be immediately submitted for publication in the Transactions (Special Regulation 3); but authors may retain copies and publish the same at their pleasure after the adjournment of the Congress. *Constituent Organizations:* By-law XI. All medical, dental, and pharmaceutical organizations, the titles of which have been transmitted with approval to the Committee on Organization, or which may hereafter be transmitted with approval to the Executive Committee by any member of the International Executive Committee, each for his own country, shall be subject to election by the Executive Committee, approved by the President, as

constituent bodies of the First Pan-American Medical Congress; and each organization thus constituted shall have the right to designate as delegates all of its members attending the Congress; but no such organization shall meet at the time and place of meeting of the Congress as a distinct body; providing, that the secretary of each such constituent body shall furnish a list of officers and a statement of the number of members of his respective organization to the Secretary-General, not later than sixty days before the meeting of the Congress, and shall forward a list of delegates chosen to reach the Secretary-General before the opening of the Congress.—By the Executive Committee, Feb. 22, 1893.

Department of Medicine at the World's Fair.—

The plans for medical service promulgated by the Medical Director of the Exposition, contemplate the maintenance of a hospital in which the more advanced modern theories will be demonstrated. A striking feature of this will be an effective ambulance service, each ambulance being accompanied by a trained nurse when called for the removal of a patient to the hospital. The Board of Lady Managers has begun the foundation of an elaborate scheme, the establishment and maintenance of a series of movable hospitals or relief stations, at various points on the World's Fair grounds, by means of which the safety and comfort of the public would be greatly served. Patients requiring immediate attention can be taken into one of these relief stations and there receive such prompt, expert care as will often render unnecessary their removal to the hospital.—*Medical Record*, March 18, 1893.

"Cerebrine."—

The extract "cerebrine" is manufactured under Dr. Hammond's personal supervision, and the sales-depot is the Health Restorative Co., 90 S. Fifth avenue, New York City.—*Medical Bulletin*, March, 1893.

A Convalescent Hospital.—

St. Luke's Hospital, of New York, will, in connection with its new structure, have a convalescent hospital, $100,000 having been donated for that purpose.—*Medical Bulletin*, March, 1893.

Therapeutic Brevities.

Teucrin: A New Therapeutic Agent.—Mosetig (Internationale Klin. Rundschau vii, 6, p. 214) has prepared from the plant *Teucrium Scordium* an extract to which he gives the name teucrin, and that he has successfully employed by subcutaneous injection in the treatment of various mycotic affections. An infusion is prepared by means of hot distilled water from the dried and not too old plant; the expressed fluid is concentrated to the consistency of honey, repeatedly cleared with alcohol, finally evaporated to a specific gravity of 1.15, and introduced into sterilized vials, which are then hermetically sealed. The product is a dark-brown fluid with a pungent, bitter taste, and miscible in all proportions with water. The dose is 4 minims injected subcutaneously. The agent has been employed most largely in the treatment of tuberculosis of soft tissues. The injection is followed by constitutional symptoms that last perhaps for eight or ten hours. In from half an hour to four hours the temperature rises; occasionally there is a chill; in a few cases cutaneous eruptions appeared; in cases in which pulmonary tuberculosis also existed the sputum assumed a milky appearance. Breaking down took place at the site of local disease, with a throwing off or absorption of the disintegrated structures.—*Medical News*, March 11, 1893.

A New Preparation of the Thyroid Gland for the Treatment of Myxœdema.—The remarkable results obtained in the treatment of myxœdema by means of preparations of the thyroid gland have stimulated investigators to find some method of preparing a dry stable preparation to replace the crude gland or the extracts that have been employed. Guided by a belief that the thyroid gland might contain some hitherto undescribed ferment, White (British Medical Journal, No. 1676, p. 289) determined to try whether, by the formation of gelatinous or flocculent precipitates in liquid extracts known to possess the desired activity, the active principle could be separated from the large amount of proteid and other organic substances present. The glands were first exhausted with a mixture of equal parts of glycerin and water. The filtered fluid was acidulated with phosphoric acid, and calcium hydrate was added until an alkaline reaction was produced. The precipitate was filtered out as rapidly as possible, washed, and dried over sulphuric acid without heat. Of the resulting powder the

ose is 3 grains. Good results have attended s use.—*Medical News*, March 11, 1893.

Hiccough Relieved by the Wet-Pack.—Chamard-Henon (Rev. de Thér. Méd.-Chir., 1893, No. 3, p. 77) has reported the case of a man, 4 years old, in which, in the third week of n attack of scarlatina, incessant hiccough ppeared, preventing sleep and interfering ith the taking of food and drink. The rine was scanty, high-colored, but contained o albumin. The temperature ranged beween 101° and 102°. After all other measres had been exhausted, it was concluded o apply peripheral stimulation in the hope f overcoming spasm and establishing diureis. Accordingly the man was every three ours placed for five minutes in a wet-pack. fter the third application the flow of urine ncreased and the hiccough subsided. In all, wenty-nine applications were made, and the elief was permanent. The view is expressed hat the hiccough was dependent upon an acon upon the nervous system by the toxines f scarlatina, upon the elimination of which ith the urine the symptoms disappeared.—*Medical News*, March 11, 1893.

Sulphate of Sparteine as a Remedy for Tremrs.—The author was led to use sparteine rom having seen tremor cease in a case in hich the drug was used because of cardiac rouble. In one case of cerebral syphilis, in hich specific treatment relieved all symptoms except tremor, marked improvement in hat particular followed the addition of parteine to the treatment. Improvement llowed its use also in three cases of neurashenia, two cases of old hemiplegia, one of ocomotor ataxia, and one of meningitis folowing sunstroke. A case of long-standing aralysis agitans was treated without benefit. he effect of the drug in these cases depends pon its action as a depresso-motor. In the enile and neurasthenic cases, with weak eart, part of its action may be due to timulation of that organ, and hence the nprovement in the circulation.—Charles S. otts, M.D., in *Therapeutic Gazette*, June 15, 892.

Abscess of the Nasal Septum.—Dr. Edward . Bermingham, Surgeon to the New York hroat and Nose Infirmary, contributes an rticle on this subject, with the report of a ery interesting case. A boy 11 years of ge fell on the pavement, striking on his face. No symptoms beyond slight cutaneous abrasions were noticed for ten days, when the nostrils became occluded, and headache and frontal pain became almost unbearable. Four days later, when first seen, a tumor, looking like an inflamed polypus, presented through each nostril. Incision released a teaspoonful of thick pus and gave immediate relief to all symptoms. After-treatment consisted of thorough cleansing several times daily with a mixture of one part of glyco-thymoline to three of water. Recovery followed promptly.

Dermatol in Plasment as a Urethral Medicament. — Dermatol, suspended in plasment, has been used by Vaughan (New York Medical Journal, No. 18, 1892), in strength of 3 to 5 per cent., as an injection through a catheter in acute urethritis. He concludes: (1) That in the treatment of acute urethritis soothing applications rather than irritants should be used. (2) That the passage of the soft rubber catheter recommended does not, as a rule, irritate the urethra; that if it does it should not be used. (3) That plasment is an excellent vehicle for urethral medicaments. (4) That dermatol in plasment is the most efficacious drug he has used in urethritis, although he has used no other drug in plasment. (5) That treatment by the above-described method has produced a milder course and fewer complications than that with other remedies that he had used.—*Medical Record.*

Mode of Administering Tar in Chronic Bronchitis.—Dr. W. Murrell believes that tabloids, containing one grain each, constitute by far the best mode of administering the drug. They contain the whole of the constituents of tar, are palatable, and speedily disintegrate. The usual form of administration is three or four every four hours, but a better is to suck one frequently, in fact every time the cough is troublesome. Concerning the use of tar in perles or capsules, he has had but little experience. On the Continent, there has been an increasing demand for the "Drogues de Christiania au gourdon de Norvège," but these are not adapted to the tastes of his own countrymen and are expensive.—*Medical Press*, November, 1892 (*Epitome of Medicine*, February, 1893).

Borate of Soda in Epilepsy.—Pastena (Ann. di Neurologia, fasc. i–iii, 1882), from a somewhat extensive trial of borate of soda in epi-

lepsy in the Manicomio Provinciale of Naples, concludes that the drug diminishes the number of attacks, and sometimes stops them entirely for months together. It is most effectual in "classical" attacks of long duration, which it reduces to a few minutes; it is also very useful in slighter forms—for instance, in epileptic vertigo. The drug has no bad effect, either on the digestive apparatus or on any other part of the organism. It seems to act by paralyzing the motor centres, and has no great effect either on the motor agitation following epilepsy or on mania. The drug was given in doses of 4 to 7 grammes in 200 grammes of water and 20 of syrup.—*British Medical Journal*, Jan. 28, 1893.

Chloralose.—Hanriot and Richet, in a report to the Académie des Sciences, describe a new hypnotic formed by the reaction of chloral and glucose. Chloralose has a bitter taste, is slightly soluble in water, and produces very marked hypnotic effects, being more active than chloral. By experiments on themselves the authors found that three to six grains might be considered a proper dose, although twice as much could safely be given. A dreamless quiet sleep was produced, without any unpleasant results on waking.—*Boston Medical and Surgical Journal*, March 9, 1893.

Periodates, a New Remedy for Cholera.—According to the Münch. N. N., the name Periodates is applied to an alleged mineral substance long known to the learned world, which is said to possess the wonderful property of destroying not only the comma bacilli, but the poison (toxine) which they produce. The experiments made with the remedy in several cholera barracks of Hamburg are claimed to have yielded surprisingly favorable results.—*Pharmaceutische Post*, p. 1209, Nov. 13, 1892.

Incontinence Mixtures.—D. J. Blake White recommends:

Sodii benzoatis, } aä gr. xx.
Sodii salicylatis, }
Ext. belladonnæ fl., gtt. ij.
Aquæ cinnamomi, fl ℥ iv.

M. Sig.: Teaspoonful four or five times daily, for incontinence of urine in children.

—*Cincinnati Lancet-Clinic*, March 11, 1893.

Medical Progress.

A Plea for Cleanliness in the Treatment of Naso-Pharyngeal Catarrh.—This is the title of a paper by Dr. Edward J. Bermingham, Surgeon-in-Chief to the New York Throat and Nose Infirmary, in which he lays stress upon the importance of cleansing the nasal cavities from one to three times daily after any existing stenosis has been relieved, and during the employment of topical medication by the surgeon. If the parts are not cleansed, the medication does not reach the diseased mucous membrane, and treatment will be disappointing. Proper cleansing with an alkaline, antiseptic, non-irritating, and deodorizing solution will alone cure 50 per cent. of cases of simple hypertrophic catarrh, and will benefit atrophic cases. The writer gives preference to a 25-per-cent. solution of glyco-thymoline as a cleansing fluid. He condemns the old-time douche and all those where any force is used, and advises that the fluid be introduced through a small glass douche devised by him, which allows the fluid to gravitate slowly to the naso-pharynx. Here it should be kept in contact with the parts for a minute or two before the nose and throat are cleared.—*New York Medical Journal*, March 11, 1893.

Prickly Heat.—If my view of the ætiology of prickly heat be correct—that it develops on a skin soaked in perspiration and insufficiently supplied with fat—we have at hand a means of preventing the occurrence of the rash in those who are subject to it. I have advised a number of patients who suffer every summer from prickly heat to anoint the usually affected regions with a fat, after their morning bath. The fat recommended was for obvious reasons lanolin, to which a little almond oil was added. This operation is only a prophylactic measure, and is not to be continued if the rash develops. This treatment will probably throw still more work on the sweat glands; for, as Unna has recently shown, the diffusion of vapor of water—the insensible perspiration—is diminished through a horny layer impregnated with fat. But with patulent sweat-ducts this circumstance should not produce prickly heat. Of course, after the rash has appeared, the best treatment is a drying application, especially powder, and the avoidance of everything likely to produce sweating.—S. Pollitzer, M.D., in *Journal of Cutaneous and Genito-Urinary Diseases*, February, 189[illegible]

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Original Articles.

STRICTURE OF THE URETHRA—SIMPLE BALANITIS WITH PHIMOSIS.

CLINIC BY G. FRANK LYDSTON, M.D.*

GENTLEMEN—The first case to which I call your attention to-day is that of a young man, 23 years of age. He states that he has had several attacks of gonorrhœa, the last one occurring about last November and persisting up to the present time. The first attack occurred over four years ago and lasted for a year. He says he thinks he has not been well since the first attack—a much more accurate impression, by the way, than most patients entertain regarding their condition in cases of this kind. The integrity of the urethra following a prolonged attack of gonorrhœa in early life is often more apparent than real; but it is often a matter of considerable difficulty to convince the patient that the trouble for which he consults us is really the remains of a gonorrhœa of former days.

On inspecting the urethra in this case, we find a slight muco-purulent discharge escaping at the meatus. The patient informs us that it is variable in amount, sometimes being quite free, at other times almost disappearing. There is no obstruction to urination, but the patient complains that he has suffered off and on from painful micturition, and that he is compelled to urinate every hour or so. Practically speaking, we are compelled to analyze this case and determine the presence of anterior or posterior urethritis, or both, and the condition of the canal as regards strictures.

There are many methods of determining the existence of posterior urethritis. It is obvious from the fact that there is quite a quantity of discharge at the meatus, which at times is excessive, that there is more or less anterior urethritis. I doubt not that we will find strictures of greater or less calibre in the anterior urethra which will explain the persistence of anterior urethral inflammation. The simplest method of determining the existence of posterior urethritis is to request the patient to urinate in two vessels, the greater portion of the urine being passed in the first vessel and the remaining few drachms in the second. Should the urine in the first glass contain muco-pus, and the urine in the second glass contain none, the reasonable inference is that there is no posterior urethritis. Should muco-pus be present in the second glass, it demonstrates conclusively the presence of posterior urethritis. Another good plan is to irrigate the anterior urethra until it is thoroughly freed from mucus and pus; the patient then being asked to urinate, the presence of inflammatory products in the expelled urine is conclusive evidence of posterior urethral inflammation, which may or may not be extended to the vesical mucous membrane. As a rule, in these cases the bladder is not involved to any great extent. The gonococcus does not infect the vesical mucous membrane. When cystitis occurs, it is the result of secondary mixed infection, either by direct extension of inflammation or from the use of a dirty instrument. Gonorrhœal cystitis is much rarer than is generally supposed; indeed, it is a question whether it should be properly so called. Most of the cases in which gonorrhœal cystitis is said to exist, consist of posterior urethritis or prostatitis involving what is practically the vesical neck.

As the patient urinates, you notice there is no great amount of obstruction to the urinary outflow. Does this prove that strictures may not exist in the urethra? One point which I wish to impress firmly upon your minds is the fact that a stricture of quite small calibre may exist without neces-

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sarily producing any appearance of marked obstruction to the outflow of urine. Again, strictures of moderately small calibre may exist, yet quite a large sound may be passed into the urethra. The passage of the sound as a means of diagnosis is not of very great value, and in strictures of very large calibre in the pendulous portion of the urethra it is absolutely worthless; yet you may meet with many cases in which some physician or other has passed a sound of fair or large size and has pronounced against the existence of stricture. Stricture may nevertheless exist in such cases and require operation. Furthermore, it makes no difference from a surgical standpoint whether the contractions discovered in the canal are of congenital origin or not; they bear a pathological relation to the urethritis, and may require operation, in one case as well as in the other. Any narrowing of the canal or point of inelasticity may require operation when a chronic urethritis exists, for such points of contraction or inelasticity induce friction and relative unrest at the involved point.

We will pass a sound upon this patient and see what we can discover. I have here a sound with a calibre of 26 French. I pass it into the urethra, and you observe that it enters the bladder quite readily. There certainly can be no marked obstruction in the deep urethra. The question is: Are there strictures in the anterior portion of the urethra? I withdraw the sound and will test with the exploring bulb.

I have in my hand a bulb with a calibre of 20 French. I pass this into the urethra, and I discover a point of narrowing, where the mucous membrane is exquisitely tender, at the depth of an inch and a half. Passing the bulb along, I discover another at the depth of three inches. Having passed this point, the bulb passes down to the bulbo-membranous junction without further impediment. As I withdraw the bulb, you will notice that there is a distinct tugging imparted to the urethra as the shoulder of the bulb passes through the contracted portions of the canal. On examining the bulb after its withdrawal, we see that the posterior surface of its shoulder is coated with a tenacious muco-purulent material, which has been scraped off from the mucous membrane of the urethra posterior to the strictures which I have described.

These strictures are of large calibre, but they none the less require operation. The first thing to do in a case of this kind is to eliminate all sources of friction, by urethrotomy of all points of contraction.

As we have seen by examining the urine in this case, there is a certain amount of posterior urethritis. Having removed the strictures by operation, there still remains the treatment of the posterior inflammation to be considered. The persistence of a so-called gleet—*i.e.*, a chronic urethral discharge—after urethrotomy, does not negative the value of the operation, even in the particular case involved. It is our duty to subtract the strictures from the pathological *ensemble* as the primary indication in the treatment of a case of chronic urethritis. Having cured the strictures, the other pathological conditions require treatment upon their own merits.

Internal Urethrotomy.—We will now proceed to perform internal urethrotomy on this patient, using the instrument and method devised by Dr. Otis. The circumferential measurement of the penis shows apparently that this patient should have a normal calibre of only 30. On incising the meatus however, we find that a 35 French passes readily down to the site of the first obstruction. The explanation of the inaccuracy of the measurement in this case is that this young man's penis has shrunken under the mental emotions incidental to exposure before the class, and the dread of operation. This is one of the chief sources of fallacy in the Otis method of operating. I will divide the strictures in this case up to a calibre of 35 French. We can do this with little or no pain by the use of a 2-per-cent. solution of cocaine. I would advise you not to use a stronger solution than this, and to make the solution by dissolving the cocaine in a 1-per-cent. solution of carbolic acid, which appears to localize the action of the cocaine. I find that with this manner of using, the use of cocaine is very satisfactory to me.

As you see, there is only a moderate amount of bleeding. We will order the patient to have an ice-bag applied to prevent the possibility of serious hæmorrhage coming

on after the effect of the cocaine passes off. I will have the meatus dilated every second day by my assistant, and we will instruct the patient to report as soon as the bleeding stops, which will probably be in four or five days. He will be warned meanwhile against moving about. It is usually better to keep patients, when internal urethrotomy has been performed, perfectly quiet in bed. I wish to insist at this point upon the practical fact that it is not necessary to pass sounds every day or two after an internal urethrotomy. I never pass a sound sooner than the third day, and usually not sooner than the fourth or fifth day after operation, then at intervals of two or three days, the intervals being gradually lengthened until complete healing has occurred.

The next patient, a young man 22 years of age, was referred to me by a professional friend for the treatment of a gonorrhœa, which he claims has lasted two months. The patient claims that he had an attack of short duration about two years since, and has been treated by injections and balsamic preparations *ad nauseam*. On examination we find a profuse purulent discharge, which, however, does not escape from the meatus but around it from beneath a tightly phimosed prepuce. The question arises now: What condition have we here? Evidently the case is not one of gonorrhœa, and all the patient's treatment for that condition has been misspent energy. We may have in this case a chancre, chancroid, or a simple balanitis, or a venereal sore, either syphilitic or chancroidal, with a complicating balanitis. We find the glands in the groin perfectly healthy, and no history of any secondary symptoms. We cannot feel through the prepuce any indurations suggestive of a chancrous neoplasm, or depressions incidental to the destructive action of chancroid. If a specific lesion exists under this prepuce, the chances are largely in favor of the auto-inoculability of the secretion having disappeared.

The quickest way to solve the problem, and at the same time put the patient upon the road to a cure, is to expose the glans penis by a dorsal incision, and thus cure the phimosis and expose any lesions which may be present. We will inject a 2-per-cent. solution of cocaine along the dorsum of the foreskin, and, waiting a few moments, we can painlessly incise the foreskin upon the dorsal surface of the glans. The incision should be long enough to expose the glans freely; and we find on inspection of that structure that there are no pronounced ulcerations, but we observe an excoriated, reddened condition of the mucous membrane of the glans penis and the preputial reflection. The surfaces are covered with pus. We have here, then, a case of simple balanitis, perhaps due to the irritating products of the unclean sexual organs of the female in combination with the decomposing secretions of the part itself. We wash the part with an antiseptic solution, stitch the cut edges of the prepuce together, apply a dressing of iodoform gauze, and request the patient to report again in three days.

The next time we see the patient we will expect the wound to heal by first intention, the sutures can be removed, and the patient will be on the way to recovery. This case shows very vividly the disagreeable results of pent-up secretions under a phimosed prepuce. It also shows how carefully such a condition should be studied to enable us to differentiate it from ordinary gonorrhœa.

Chicago, Ill.

ALCOHOLIC NEURITIS—RHEUMATISM—EPILEPSY.

CLINIC BY HENRY M. LYMAN, A.M., M.D.*

GENTLEMEN: The first patient I present to you this morning is 44 years of age, a teamster by occupation. He says that once in every eight or twelve months he goes on a spree, and "drinks hard for two or three weeks." During the interval he does not use alcoholic drinks of any kind. This uncontrollable desire to drink comes on suddenly and unexpectedly. As representative of other cases which I have seen, there now occurs to me the case of a man who was entirely free, according to his own statement, from any appetite for alcoholic stimulants for months at a time; he was perfectly abstinent so far as alcoholic drinks were concerned; then all of a sudden, in the midst of his work, while

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engaged in some active occupation—it made no difference what it was—the desire came upon him like a wave and overwhelmed him. He would drop everything and would commence drinking. The desire to drink would last perhaps two or three weeks; then, after having exhausted himself completely, he would stop drinking. These periodical drinkers present many points of analogy with other paroxysmal diseases, such as epilepsy. An epileptic patient, as you know, is able to attend to his ordinary duties for a number of days, weeks, or months, then an aura manifests itself in some part of the body, followed by a convulsion or succession of convulsions; the patient is upset for two or three days, then everything passes off, and the patient is all right again for another period of time. In this respect the form of alcoholism under consideration resembles epilepsy. Of course, the conditions of the brain are not the same as in epilepsy, but are analogous to those which characterize the epileptic condition.

This man is unable to define for us, on the spur of the moment, how his paroxysms come on. They do not come on gradually, he says, but very suddenly, and he is carried away by the desire to drink. After the paroxysm is over, his stomach is out of order; he feels as if he does not want any more. He says he has never had delirium tremens. During the time of the drinking paroxysms he drinks a great deal. He says he can scarcely walk a block without taking a drink. He drinks nothing but whiskey, and takes it "straight." No wonder he has attacks of gastritis. It is astonishing how much some patients will drink. I have known them to take forty, fifty, or sixty glasses of whiskey a day; and that is not an uncommon experience with patients when they are on a spree. They seem to have no self-control whatever during that time. He eats nothing while he is on a spree; so that we have a process of slow starvation going on at the same time, and it continues until the patient has inflammation of the stomach, is starved, and cannot stand it any longer. His nervous system is then worn out, and the craving for alcohol ceases, just as the convulsion of epilepsy stops when the force of the brain is exhausted. One epileptic patient is exhausted by a single convulsion; another by a succession of convulsions that have recurred until the explosive matter in the brain is exhausted—then, for the time being, there is no convulsion.

We are told that the nerves of the left arm are affected by pain; that as the effects of the whiskey die out, pain comes on. It seems to be localized in the shoulder-blade of the left side. It is a shooting pain. He has hyperæsthesia of the left hand; but there is no well defined tenderness along the nerve tracks. He has not worked for three weeks, on account of the pain in his hand. There is very slight tremor of the hand, but it is hardly perceptible. He has no pain on the right side. Very likely this experience of suffering will be repeated. It will become more frequent. Here is a significant fact: while he is under the influence of alcohol he does not feel distress to any considerable degree; but when the effects of the alcohol die out, when the alcohol is eliminated and he is no longer under the influence of a narcotic, he begins to suffer. It shows that we are witnessing the commencement of a neural affection, which will extend to the lower extremities by-and-by. It is the early stage of alcoholic neuritis. You know the nerves are liable to become inflamed under the influence of various poisons. Vegetable poisons of various kinds produce similar effects. Alcohol produces a particular kind of inflammation of the nerves which is characteristic of chronic alcoholism. The pain involves the nerve twigs; a dull, burning sensation is experienced most frequently in the lower limbs; sensory disturbance first, then motor disturbances. The patient may be paraplegic or paretic, and as a consequence there may be more or less complete loss of power over the muscles in the lower extremities, due to chronic alcoholic neuritis. That is what we are going to get in this case, because this patient is not likely to reform. These periodical drinkers are like insane persons who have recurrent paroxysms of insanity. They are not able to reform themselves. The only way to save these patients is to lock them up when the craving or desire for alcohol comes on, and to keep them locked up until the paroxysm is over; but in this free country this is rarely ever done.

Before dismissing the case I shall try the condition of the reflexes. Let us see whether

the lower extremities manifest any disturbance. The reflex arc is suffering in the lower extremities as a result of the commencement of damage to the nerves. By-and-by there will be paresis; that will be the history of this case.

With regard to the therapeutics of cases of this description, the cure is to be reached by withdrawing the cause. But how can we do that? We cannot do it without restricting the liberty of the patient. We must have some arrangement made whereby, when the impulse comes over him, he shall be locked up so that he cannot get liquor. Of course he will be like a raging animal, and there will be an exhibition of acute nervous disorder before he will be fit to be free once more. As to treating him for this condition of things, there is very little that can be done under the circumstances. If we could restrict his liberty when the impulse to drink comes on, we could at the same time administer tonics. In order to overcome the enfeebled condition of the nerves, I should advise the use of strychnia, which is an excellent nerve tonic. It should be given in moderate doses, about $\frac{1}{60}$ of a grain. It is best given hypodermatically. If you give this man nitrate of strychnia in doses of $\frac{1}{50}$ of a grain hypodermatically, every four hours, it will have an excellent effect. For the relief of pain we resort to anodynes, commencing with phenacetin, and striving to avoid opiates. If phenacetin fails, try acetanilid, 10 grains every three or four hours. If those fail, you may use belladonna, or, more certainly, atropine. Sulphate of atropia, commencing with $\frac{1}{120}$, $\frac{1}{100}$, or $\frac{1}{80}$ of a grain, three times a day, is an efficient anodyne in these cases. It may be necessary for you to increase to $\frac{1}{60}$ of a grain of sulphate of atropia, depending upon the condition of the patient. Reserve true opiates for the last extremity, because these patients are very apt, if you give them, to become opium or morphine eaters. So try to get along without any preparation of opium if possible.

The next patient is 50 years of age, and a traveling man by occupation. He neither smokes nor chews, and it is only occasionally that he takes a glass of liquor, so that we can exclude alcoholism in his case. He says that he feels at times embarrassed while on the road in regard to his health. He is troubled with indigestion and belching of wind; but for the last two or three weeks has been free from this trouble. He has had typhoid fever, pneumonia, scarlet fever, diphtheria, smallpox, and, he says, syphilis years ago, but it was not followed by eruptions on the skin and loss of hair. The history of the latter disease is obscure. He feels sensitive to cold. We will find out whether this sensitiveness of which he complains is in the flesh, or whether it follows the tracks of the nerves. I will take the arm and follow the large nerve-trunks down the inner side, where a branch of the radial comes. Near the surface it is tender. Wherever we find a nerve which enters a muscle, there is a tender spot. I am going to feel of the pectoral muscles. I am on the long descending thoracic nerve that runs down the side of the chest. Squeezing the muscles does not give so much pain. When I press between the ribs it does not hurt him. When I press on the back it hurts him. We find in the distribution of the cervical and the upper dorsal nerves extreme tenderness, but below that he is all right. We have then another case of neuritis. The cranial nerves have escaped. The lower cervical and upper dorsal nerves are the centres of disorder. He informs us that his case was a little more severe at first than it is at present. It seems that the muscles in the side of the neck were stiff and painful, so that the head was kept perfectly straight. There was nothing like torticollis in this case, a condition in which some of the muscles may be in a state of contraction so that the head is drawn backwards, forward, or sideways, according to the situation of the affected muscles. Remember that the nerves which come out from the spinal cord are mixed nerves, containing sensory and motor fibres. A disturbance of these nerves would first declare itself as a sensory disturbance. Sensation is an exceedingly delicate function, and is easily disturbed. Any disorder of this kind gives rise to painful impressions before it interferes with motor impulses. This patient does not complain of paralysis, yet there is a painful absence of sensation in the fingers. The man feels the extremities

of his fingers, but there is a painful loss of common sensation. This seems paradoxical, yet there are conditions of the sensory apparatus in which the power of tactile sensation is lost to a greater or less degree, and the patient suffers extreme pain in the parts which are deprived of the power of taking up tactile or common sensations. That is the reason why we come to speak of "a painful loss of sensation," and it seems exemplified in this case. What is the cause of it? We have excluded alcoholic poisoning, but it is probable that some other poison has been active. The history with regard to syphilis is not clear, but syphilitic inflammations of the nerves have a different history. They are connected with palpable lesions of the cord or of the brain; and here we have nothing of the kind.

In questioning him further we find he has had malarial fever. Thirty-five years ago, when a young man, he had quite a siege of malarial fever. The effects of it have disappeared. Patients who suffer from malarial poisoning sometimes manifest symptoms of inflammation of the nerves that differs from neuralgia of the nerves. Neuralgia and neuritis are closely allied. An almost imperceptible inflammatory process of the nerves produces neuralgia; a severe inflammation produces neuritis—so you see the conditions may run into one another. Neuralgia is a sort of functional disturbance of sensation, while the pain that follows neuritis is the result of demonstrable disturbances of structure in the nerve, caused by inflammation. That is the only difference. Cases of neuralgia and neuritis may follow directly upon malarial poisoning, and are the consequence of profound intoxication. During the period of intoxication, or when the patient recovers from malarial poisoning, the nervous symptoms disappear, so that, as this patient has long since recovered from the effects of the old fever, we can exclude malarial neuralgia and neuritis. Gout, I think, we can exclude in the same way, though the patient's age would rather favor the development of gout. If he were a man in the habit of drinking beer and wine and living luxuriously, we might attribute his condition to gout, but he gives us no such history; consequently we can exclude gout. We must, therefore, by exclusion attribute his condition to that great enemy of the people—rheumatism.

The peculiarity of this case seems to lie in the fact of the pain not being generalized. It does not involve the lower parts of the body; it does not involve the head. It seems for some reason to have attacked a segment of the membranes of the cord, and to have affected the nerves that are connected with that segment of the cord. I should not say, perhaps, segment of the cord. You remember how the peripheral nerves that come out from the spinal cord run through the sheathing membrane of the cord, and that when there is inflammation involving that membranous sheath they become the seat of irritation and of pain and more or less disturbance of motion. That seems to be the condition in this case; and since we cannot refer it to the direct effect of cold, we must refer it to rheumatism. Why should the pain localize itself? The patient tells me it came on in July, during hot weather. You know how it is in hot weather: one should perspire freely. This patient says it takes a great deal to make him sweat. Even during very hot weather he sweats but very little, and as a consequence feels uncomfortable. He tells us that he is very nervous at night about getting to sleep; that he lies in bed till one or two o'clock in the morning before he goes to sleep. You find that characteristic in cachectic states. It does not make any difference what the cachexia may be, whether it be rheumatic, alcoholic, syphilitic, gouty, or malarial—all these cachexiæ depend upon an intoxication that irritates the brain and produces a disturbance of sleep, which manifests itself in two forms: either the patient has great difficulty in getting to sleep, but then sleeps pretty well during the night; or he falls asleep as soon as he goes to bed, but wakes up about two o'clock in the morning, and lies awake for two or three hours, suffering perhaps more or less pain, before he drops to sleep again. These are the two principal forms of disturbance of sleep that we encounter.

With regard to perspiration, persons perspire more freely and easily during hot than cold weather. It is an unfortunate thing if rheumatic patients cannot perspire freely. Usually such are the most afflicted sufferers.

I remember the case of a man who used to have periodical attacks of rheumatism, almost like the drinkers and insane persons that I have spoken about. He would have the most intolerable attacks of rheumatism, crippling him for weeks at a time. In those days we did not have salicylic acid; this case occurred many years ago, before we had the salicylates for relief of rheumatic pains. At last he changed his business and became a boiler inspector. The business of a boiler inspector is to go inside of the empty boiler and examine it; the insurance companies send their agents to examine these boilers every once in a while to see that they are in good condition to be insured against risk of explosion. The mode of inspection consists in emptying the boiler, then the inspector strips himself, goes into the boiler, and examines it from the inside. It is an object for these boiler inspectors to examine as many boilers a day as possible; consequently they do not wait for them to cool. They are simply emptied of water and cooled down to a tolerable degree, then the inspection is made. Well, this man did not have an attack of rheumatism after he commenced that business. He inspected two or three boilers a day; always came out in a wringing sweat, and rubbed himself dry, inspecting one boiler after another. It was a perfect Turkish-bath system. He perspired easily and profusely, and that is what I desire to impress upon your minds in these cases. Persons who perspire easily, and get a return of perspiration if it has been checked by a chill, are enabled to throw off their rheumatic attacks more readily than those who sweat with difficulty, or who, when they get into a sweat, find it dfficult to get up another after it. If they are exposed to the cold while in a perspiration, they take cold, and have an attack of inflammatory or muscular rheumatism, and find it difficult to get rid of it. That seems to be the condition of the patient before you.

Persons who perspire freely are very often negligent. When they are perspiring they walk against the wind with their coats open, or they sit by a window, letting the cold play upon them. Attacks of rheumatism are precipitated in this way. It is possible that the case of this patient originated in that way. You know how it is in the street and railway cars: a man sits by a window, and the wind blows down his neck; the lower limbs are protected, while the upper extremities are exposed to cold draughts of air. Local inflammation is thus produced by refrigeration; it is in this way that we account for muscular rheumatism *a frigore*. There is another way in which refrigeration takes place: Sometimes in the spring or fall we have cold weather, and as a consequence people are heavily clothed. We may have a succession of cold spells, after which there comes a warm day. These people do not keep their coats buttoned up; they get into a perspiration, stand on a street corner, or walk with the wind blowing on the back of the neck. The back is less thoroughly protected than other parts of the body, and this is unfortunate for patients who are rheumatic. The ribs and the spinal column should be thoroughly protected. You must enjoin these patients to button up their coats, and put the chest-protector behind instead of in front; better still, to have a chamois-skin undershirt, which affords an immense amount of comfort to patients who are sensitive to rheumatic attacks.

What shall we do for the relief of this patient? Turkish baths would be an excellent thing. If he cannot take them, a course of warm baths would be advisable. Let him jump into a tub of warm water and remain there half an hour before going to bed; then get into bed and lie between blankets so that he can sleep well protected. If perspiration follows the bath before going to sleep, let him have a dry rub so that the skin and clothes shall be dry. A flannel night-gown is a protection to persons who have night sweats. You must guard them against the effects of refrigeration by making them wear flannel night-gowns instead of cotton shirts. You can do a great deal for the relief of these patients in that way.

In case it becomes necessary to resort to therapeutic treatment, the drug to be used first is salicylic acid, which is somewhat effectual, but not as effectual as in cases of inflammatory rheumatism where the joints are acutely affected. You may try it for a week—not longer than that. If it does not give relief, use phenacetin, acetanilid, or salol. See that

the bowels are cleansed; give calomel and soda so as to evacuate them thoroughly, then keep them open. It is well to give these patients, after a thorough evacuation, a blue pill at bedtime, to be followed in the morning by a Seidlitz powder, or a dose of mineral water, such as Hunyadi, Crab Orchard, or Saratoga water. If they cannot afford either of these, let them take ordinary Rochelle salts. But make sure there is a free evacuation of the bowels daily. After having exhibited these remedies in the manner described for a week or ten days, if pain still continues, it is advisable to commence the use of iodide of potassium and a little bichloride of mercury. Commence with the iodide, 3 grains three times a day, well diluted with water. If necessary, increase it to 5, 6, 8, or 10 grains, three times a day. This will act upon the kidneys and cause evacuation. Try these remedies for a while; and if the case is obstinate, change your tactics entirely. In a case running on like this for several months, I would not stop to use the preliminary methods that are applicable in acute cases. I would commence now, as in the chronic stage, after having evacuated the bowels thoroughly with calomel and soda, to give nitric acid (undiluted), in 5-drop doses in a tumblerful of water three times a day, having the patient use a glass tube to suck it through, so that the teeth shall not be corroded by it. It does not make much difference when he takes it, before or after meals. Perhaps it is better to take it a little before, or an hour or two after, meals, in order that the stomach shall not be filled too full. You will be surprised in a great many of the cases to see the relief from pain that follows this active diuretic course of treatment. A diuretic and diaphoretic course of treatment is what is most efficient in these cases. Turkish or hot-water baths should be taken daily for a month or more. It is in these cases that the benefit of the hot-brine baths of Michigan shows itself, and the hot springs of Arkansas, Las Vegas, Colorado Springs, and other places. These baths can be imitated at home if there be a bath establishment, especially if there be a man who can give massage, the patient taking this treatment along with the diuretic influence of nitric acid.

This little boy is 6½ years old, and ever since he was two years of age he has had spells of dizziness. Prior to this disorder of health the patient had cerebro-spinal meningitis, which confined him to bed. This attack of cerebro-spinal meningitis, from which he recovered, so far as life is concerned, was probably the cause of the attacks that he has had since. The paroxysms of dizziness came on about six months after the attack of cerebro-spinal meningitis. I think we are warranted in connecting these two facts together, though there was an interval of six months between the two disorders. The brain is not normally predisposed to the liberation of convulsive force, but as a consequence of certain diseases it becomes so, through a gradual change in its structure. Such gradual change is often started by diseases that involve the brain and spinal cord, as cerebro-spinal meningitis does.

With regard to the character of these attacks, what shall we call them? For the first two or three years the child had them from four to six weeks apart. Now he has one about every three weeks, and the mother tells us that during the last week he had three attacks. That is consistent with what I have already said; the brain becomes gradually transformed in its structure, so that finally it becomes a convulsive organ, and more and more so as the disease advances until the convulsions occur every two or three days.

We are informed that the attacks come on suddenly; that the child screams for his mother when he feels convulsion coming on, just a minute before he falls. That is, he feels an aura, and if he were older and able to describe his sensations to us, he would tell us something of a feeling of distress or peculiar modification of sensation in some part of the body that precedes the attack. The seizures last about ten or fifteen minutes, and then the patient is ready to play again. The mother tells us that he has had these attacks twice during the night, showing that there is a periodicity about them that resembles epilepsy. At any rate, we must call them *epileptiform*. The attacks are attended with loss of power of standing, and the patient sometimes vomits after them, but does not lose consciousness if we may believe

the statements of the mother. Can we call these paroxysms epileptic? An epileptic convulsion implies tonic and clonic contractions and relaxations of the muscles. These seem to be absent, excepting so far as the diaphragm and abdominal muscles are concerned. Sometimes there are partial convulsions that are localized. There is undoubtedly some spasmodic action of the muscles about the stomach that causes this patient to vomit. As he does not lose consciousness, the case differs from ordinary epilepsy. There is a fall, a painful condition, a sense of exhaustion, an inclination to lie quiet for a few minutes after the attack, then there is a revival once more—all of which mark the epileptic paroxysm. If we recall the fact that epileptic paroxysms are of different kinds, we can reconcile all these phenomena. We have a convulsive seizure, the patient falls down, has tonic and clonic contractions, loses consciousness, remains in that condition for a few minutes, and then revives. That is one form of epilepsy. Then we have other forms that are imperfectly developed. They present some of the features of an attack, while others are absent. Then we have the non-convulsive form of epilepsy, in which there are no convulsions and sometimes no loss of consciousness. There are cases in which there is incomplete loss of consciousness. There is a dazed condition that the patient experiences, in which he does not lose his senses entirely. In some cases loss of consciousness is not manifested at first. I have seen cases in this clinic who gave a history of attacks like this: At first there was no loss of consciousness, then consciousness became affected, and at last a fully developed paroxysm would occur with complete loss of consciousness. So the mere retention of consciousness does not decide against a case of epilepsy. I am inclined to think that we have to deal here with a case of epilepsy somewhat masked in its character. The persistence of the disease beyond the age when ordinary epileptiform or eclamptic seizures occur in childhood; the occurrence of vomiting sometimes in connection with the attacks; the disposition to quiet after the attack; and the fact that the attacks are becoming more and more frequent—conclusively point in the direction of an epilepsy that is becoming established and more and more confirmed.

We are told that the little patient has had stomach trouble during the winter. The first teeth are not of full size, and are much worn down. We have here a very good illustration of the first teeth being worn down by use before they fall. You should always explore the condition of the teeth in children, for in a great many cases the teeth are decayed and are the cause of constant irritation that excites nervous paroxysms. The arch of the hard palate is well formed. In some cases there is defective bony structure, the skull and the jaws are too narrow, the arch of the mouth is high and pointed, causing crowding of the teeth upon one another. That does not seem to be the case with this patient.

On the mother's side there is said to be good health, but on the father's side there is consumption in the family. If we were to see the father, we might be able to learn something with regard to hereditary tendencies. There is a peculiar physiognomy that is apt to go along with tubercular tendencies; still that does not signify a great deal. It is sometimes the case that a tubercular ancestry modifies the constitution of the child, so that there is a greater predisposition to nervous disorders than in other children. All those causes that operate upon the line of descent to weaken the constitution, in the way of tuberculosis, alcoholism, syphilis, gout, etc., tend to produce a predisposition to nervous diseases. We partly account for many diseases in this way.

Now with regard to treatment. We are told that the child has tried the bromides pretty effectually. We will take it for granted that he has; that he suffers with gastric disorder is evident from the appearance of the tongue. I would therefore as an alternative try nitrate of silver and belladonna. Nitrate of silver has a great reputation in the treatment of epilepsy, but I am sometimes suspicious that its good effects are due not so much to any direct action upon the brain substance as upon the digestive organs.

Nitrate or oxide of silver, given in small doses to a patient with chronic gastric catarrh, is sometimes admirably curative. This patient is likely to have irritation of

the brain and nervous centres from gastric causes. I would give ½ grain of nitrate of silver in the form of a pill, three times a day; then at bedtime I would give ½ grain of extract of belladonna. Let him try the effects of that for a few months. I have seen some admirable effects from such a change as that, and especially in cases where the bromides have been given for a good while and have seemed to do no good. The nitrate of silver should be given half an hour before each meal, so that it will have time to act locally upon the mucous membrane of the stomach. If it causes pain, it is advisable to give with it ½ or ¼ grain of extract of hyoscyamus. A milk diet should be kept up for months together; and while carrying out this treatment the patient ought to be fed like a child two years old.

ALCOHOLIC DELIRIUM AND ITS THERAPY.*

BY F. LANCEREAUX, M. D.†

Alcoholic delirium, also termed *nervous delirium*, *alcoholic insanity*, *trembling delirium*, is only an acute, accidental episode of chronic alcoholism, and in this respect is similar to the painful abdominal paroxysms of lead-poisoning, to an access of fever in a malarial subject, or to an attack of uræmia in Bright's disease. Not the individual who becomes intoxicated every now and then, is attacked, but the toper who, slowly, daily, absorbs a more than sufficient quantity of alcohol. The disease has not always been thus comprehended; for Sutton (who, among the first, described it so well), Dupuytren (who gave it the name of traumatic nervous delirium), and Grisolle, attributed to it a multiple ætiology. Rayer recognized the always toxic nature of the accident, and his opinion has prevailed.

This delirium is common during the warm seasons. In 1859—being then Interne at the Hôtel-Dieu—I was enabled to assist, during the prevalence of the heat, in the treatment of a sort of epidemic of alcoholic delirium. A large number of patients were attacked spontaneously or in consequence of slight affections, and many succumbed. The necessary and immediate cause of all trembling delirium is alcoholism, and especially that which is produced by wine—much more rarely that which is engendered by beverages with essences; but other causes prepare and produce the access. Hereditary subjects and the neuropathic are particularly predisposed, on account of the state of their nervous system. Amongst the things which are the direct occasion of the crisis, and play the rôle of the drop of water which causes the vase to overflow, I may cite chilling, traumatism, gastric embarrassment, certain forms of angina, and the pyrexiæ of such disorders as pneumonia, erysipelas, typhoid fever, scarlatina, acute articular rheumatism. The sudden suppression of the habitual excitant, a grave hæmorrhage, a lively emotion, and every profound perturbation of the economy may play the same rôle. Alcoholic delirium is not encountered alone in individuals who commit excesses each day; it may be seen long after their suppression, for it has been observed in convicts after several years' confinement.

This delirium rarely begins suddenly: the soil is almost always long prepared for it, and it is preceded by the psychic disturbances of chronic alcoholism. Several days before the access, the patient becomes sad, morose, fearful; his slumber is broken by brusque awakenings, in turn provoked by terrifying dreams, nightmares, hallucinations; he is agitated, covered with perspiration, beholds creatures which seek his life, participates in battles, in massacres, in acts of incendiarism; he cries, struggles, and flees.

To the visual hallucinations—by far the most frequent—are added at times illusions of hearing and touch: the patient is threatened, insulted, and bitten. In the morning the countenance is downcast, sad, anxious; the glance is wild—save in the mild forms, in which the visage may be gay and smiling. During the day the delirium ceases, to return with greater intensity the following night; the insomnia continues until convalescence. As the insomnia persists, the excitation augments—the patient speaks and is in constant movement, during the night as well as through the day. An inquiry, made in a loud voice, will alone interrupt the course o

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his vagabond ideas. The entire muscular system is in movement—the lips, the cheeks, the tongue quiver; the hands and legs tremble. Appetite is lost, the mouth bitter, the tongue coated; constipation is the rule.

After a certain time the delirium bursts out; its forms, in accordance with their intensity, have been divided into the mild, the acute or hyperacute, and the furious. Whatever the variety, we find the same phenomena, for the degree alone varies. The patient becomes irrepressibly and incessantly loquacious. His speech is brief, jerky, peremptory; he must walk, leave his bed. If he be observed when standing, it will be seen that all his muscles are in action. The upper and lower members tremble and impart to the body a sort of trepidation; the lips and muscles of the face are agitated by slight movements. The eye is brilliant and haggard; the face congested. The acts and words are founded on the hallucinations which constitute the basis of alcoholic delirium.

The patient beholds rats, cats, mice, obscene animals which seek to bite him. Hence he starts up and attempts to defend himself. If he is participating in a conflagration, he cries "fire;" if he fancies himself in battle, he strikes; if he hears voices which insult and threaten him, he replies and vociferates. He always seeks to escape and flee his frightful visions. In brief, his acts are in logical accord with the false sensations which he experiences. He feels a tingling in his members,—burns and cramps. He is without appetite; his food is devoid of taste; he smells foul odors and assists in strange scenes. The character of his illusions is shifting, painful, terrifying. Moreover, one of the most prominent traits of this delirium is the more or less complete absence of sleep in connection with the hallucinations.

The sensibility is blunted in alcoholic delirium: the subject may endeavor to walk with a fractured leg, may tear off a bandage or expose a wound. His memory is clouded, distracted, but not abolished, and he will respond to an inquiry made with emphasis. Throughout the access, there prevail most frequently complete apyrexia, stubborn constipation, and an excessive scantiness of urine.

The mild delirium, when not treated, lasts four to six days. It may disappear spontaneously or be followed by an acute delirium which may make short work of the patient. Treated properly and energetically, it gives way at the end of twenty-four hours. Insomnia, mild hallucinations, and a moderate agitation characterize this form, which is frequently encountered during the course of, and especially at the moment of convalescence from, pyretic maladies.

The acute delirium lasts several days. The agitation is greater, the trembling more accentuated. It exhibits the entire group of symptoms described in the foregoing.

In the hyperacute form the agitation is extreme. There is no repose: all the muscles vibrate. The face is bathed in perspiration; the eye is wild. The patient has the most terrifying hallucinations. He becomes dangerous to himself and to his attendants. Temperature rises; thirst is intense; in some cases epileptiform convulsions occur, and in absence of energetic intervention the nervous system is exhausted by these exaggerated disorders of the activities; sensibility, movement, and intelligence become completely apathetic; collapse ensues, and the patient dies very quickly—in a few hours.

Cure is the rule in the mild forms, and is always marked by the return of sleep. In the acute and hyperacute forms, the life of the patient depends upon the physician. If intervention be early, rapid, and, especially, energetic, death is rare. The least hesitation in the application of the treatment, or an insufficient dose of medicine, may cause a fatal termination. When delirium comes to complicate a pyrexia, its issue is variable. At all times it is an element of danger in the malady which it complicates, and it is necessary to be able to recognize it.

The anatomical lesions observed in patients who succumb to an attack of delirium tremens are few and slight, aside from the fatty surcharge of various organs, and the hepatic alterations which proceed from chronic alcoholic intoxication. Nothing is to be observed in the encephalon save a hyperæmic condition of the *pia mater* and a slight dilatation of the vessels of the superficial convolutions and white brain-matter.

If one is well versed in its characteristics,

alcoholic delirium is generally easy to distinguish. The congested, smiling face of the patient, the trembling of his muscles, his loquacity, the perspiration in which he is generally bathed, the terrifying character of the delirious conceptions, constitute a group of symptoms which place the diagnosis beyond doubt. Acute intoxication from opium, from morphine, even from belladonna, might at times be mistaken for delirium tremens, if each of these substances did not give rise to a special delirium, and if the excitation they determine were not quickly replaced by a comatose or apoplectic state.

As for the form of saturnine encephalopathia, which has been compared with alcoholic delirium, it comprises, like the nervous delirium of Dupuytren, only the delirium itself; hence we need not distinguish it. Certain maniacal deliria and general paralysis present, in common with alcoholic delirium, embarrassed speech, trembling of the lips, and insomnia; but the latter is distinguished by the terror which is its particular stamp.

Acute meningitis and tuberculous meningitis present pupillary troubles, contractions, paralyses which vary from the symptoms of trembling delirium. Nevertheless, when this delirium supervenes in a tuberculous alcoholic, the distinction between the two affections may be embarrassing.

Hydrophobia has some features in common with alcoholic delirium, as I have been able to observe on two different occasions at the Pitié Hospital. One case was that of a young woman bitten by a dog some time previously, who was brought to us in a state of furious delirium, with a sensation of constriction at the throat and a horror of liquids. This woman, covered with perspiration and a prey to various hallucinations, appeared to us, despite all, an alcoholic; large doses of chloral were administered, and she recovered rapidly.

The alcoholic delirium which manifests itself during the course or at the decline of eruptive fevers, such as scarlatina and variola, or in erysipelas, pneumonia, enteric fever, rheumatismal fever, etc., is not generally recognized, and is most often attributed to the malady which gives rise to it. Nevertheless, it is easy to recognize it by its entirely characteristic features, which are always distinct from the symptoms of a delirium proceeding from the principal malady or from inanition.

The prognosis in alcoholic delirium is variable and depends on the ancient character and the degree of the alcoholic impregnation of the subject, as well as on the intensity of the nervous disorders. Death, however, rarely ensues, if proper intervention be afforded in season, so as to avoid the nervous exhaustion. Otherwise death is most prompt; a few hours of somewhat acute excitation are sufficient to kill the patient. This delirium is subject to relapses, and under such circumstances it may be followed by persistent cerebral troubles; in this respect it resembles those attacks of intermittent fever which leave a profound anæmia in their train.

Alcoholic delirium must be classified amongst the toxic deliria; it is due to the specific action of alcohol on the cerebral elements, and the excitation which results from this is the cause of the insomnia and other disturbances which lead to nervous exhaustion and death. Accordingly, to combat this delirium, the first essential is to produce sleep. To provoke slumber—that is the end to achieve, and that is the principal indication, *in this affection*. To fulfill it, employ all necessary resources. First isolate the patient, place him in a dark room where nothing shall excite his senses; then, if there be ground for fearing that he will harm himself, place him in a cushioned or padded chamber. It is essential, in our judgment, to avoid employing the strait-jacket, which necessarily provokes him to struggle against the restraining bonds, excites him, exhausts him, and contributes to his death.

These precautions taken, it remains for us to select the medicament and to give a sufficient dose. Inevitably, the medicament must be one possessing the property of localizing its action upon the nervous elements and of moderating their reflex excitability. To this category belong the bromides, opium, morphine, hydrate of chloral, etc. The bromides not possessing the energy of the other agents and their action being much slower, should be laid aside, lest the delirium prove acute. Opium and morphine may be advantageously

employed, provided that they succeed in producing sleep. But, since very large doses are necessary, I prefer to use the hydrate of chloral, the effects of which, moreover, are more certain and more rapid. Since 1873 I have always had recourse to this remedy with or without morphine, and success has been achieved every time I have isolated the patient and spared him the strait-jacket. One condition is necessary to obtain this result: the dose of chloral must be sufficient to produce sleep, else this agent, far from calming, excites the unhappy alcohol victim and helps him to die a little sooner. Hence, every time I encounter such a case, I give immediately, according to circumstances, 4 to 6 grammes of chloral hydrate in 150 grammes of infusion of elder, sweetened with 50 grammes of syrup of morphine, and if sleep does not follow in ten minutes after the absorption of this potion I administer morphine—1 to 2 centigrammes—hypodermatically, and do not quit my patient until he slumbers. If needful, I resort to a second potion, being absolutely convinced that his life is in my hands, and that by provoking sleep I preserve him from death. Nothing is more trying than such a situation, to the physician worthy of the name, and nothing can prove better his power and the grandeur of his art. After succeeding in gaining a few hours' sleep, the patient is much more calm. It only remains to watch him, then make him sleep again if the agitation continues; and after twenty-four to forty-eight hours the delirium ceases, there is little trembling, and the patient in some cases may resume his occupation.

It is then best to recommend the preparations of nux vomica or strychnine, and, if the stomach be in abnormal condition, the use of bicarbonate of soda—finally, hydrotherapy. But these are only the accessory indications, which pertain far more to chronic alcoholism than to acute delirium. What we must here bear in mind, as in all cases where life is imperiled, is that one principal indication is to be sought, and that in order to fulfill it a medicament must be found and prescribed; for—let us heed well the truth—cure is not effected by a multiplicity of medicaments, but rather by a judicious choice of one, and the manner of its administration.

A CASE OF FOREIGN BODY IN THE AIR-PASSAGES.

BY J. W. MACQUILLAN, M.D.

Shortly after reading the able paper by Dr. Edward Walsh in the MEDICAL AGE of February 10th, the following case came under my notice:

On the evening of the 4th of March a child 16 months old was brought to my office in a state of suffocation; it had been playing on the floor and eating an orange, when it was suddenly seized with symptoms of strangulation. Evidently one of the seeds had entered the trachea. To make sure that it was not an impacted epiglottis, an exploration was made with the index finger. An operation was advised, but refused. Subsequently the child became much quieter, and passed the night fairly well. The next morning unfavorable symptoms developed, and consent was obtained to operation, but at the appointed time the child was apparently so well and free from suffering that it seemed more than the parents could do to give their consent. The following day, however, the child was much worse, and further delay would have been fatal.

When under the influence of chloroform, a roll of towels was placed beneath the neck, and the occiput flexed well backwards. An incision was made from the cricoid cartilage to the sternum, the deep fascia divided on a director, the isthmus of the thyroid and the thymus gland drawn well down by a retractor. This brought the trachea in view, which was hooked up and three of its rings cut through. After some coughing, an orange seed was expelled through the wound. Four stitches brought the edges of the incision together, which healed by first intention, the child making a perfect recovery in a few days.

There are several subjects which the general practitioner will find it important to have a knowledge of if he wishes to feel confident of his capacity to treat cases of emergency. Sooner or later he is sure to be confronted with a case of strangulated hernia, retention of urine, foreign bodies in the air-passages, wounds of arteries, intestinal rupture—all of which will require prompt surgical treatment, in many cases before even professional assistance, not to speak of an experienced surgeon, can be obtained.

There is nothing, I maintain, that gives a man so much confidence in himself as an honest knowledge of anatomy, and not to be afraid to use it when occasion requires. He need not know the anastamoses of every arterial twig, nor understand the intricacies of the osseous labyrinth, but he can train himself to form a mental anatomical picture of the different regions that makes him master of the situation and gives him confidence in himself, which is the sure road to success. I wish I could impress on all those who are enjoying the privilege of the dissecting-room, that practical anatomy is one of their staunchest friends, which will stand by them in the hour of trial and bring them forth triumphant. Every country doctor should be capable of treating wounds of the intestine surgically. Practice on the viscera of animals will soon make him proficient in adjusting sutures and familiar with the technique of the various operations.

Such knowledge would be the means of saving a large number of lives annually.

Cleveland, Tenn.

DR. CHARLES SHEPARD.

At a meeting of the Grand Rapids physicians, held March 10, 1893, the following resolutions were adopted:

WHEREAS, Dr. Chas. Shepard has gone to his final rest after a long, honorable, and well spent life, we have come together to give expression to our esteem for our venerable associate, whose death gives gloom to our feelings, while his memory excites in us the desire to be as deserving of the respect of friends; therefore, be it

Resolved, That the medical profession has lost an able, honorable, and conscientious physician and surgeon, whose professional record is above reproach, whose honesty was unquestioned, whose simplicity and frankness were genuine. That the community has lost an ideal citizen, who has been identified with its interests for more than half a century, and who has filled positions of honor and trust with credit. And be it further

Resolved, That we express to the family and friends of the late Dr. Shepard our admiration of his untiring zeal in all things pertaining to a worthy representation of the true physcian, and our sympathy with them in their great trial and bereavement. And be it also

Resolved, That a copy of these resolutions be sent to the bereaved family, and furnished to the State medical journals and to the local press.

S. R. WOOSTER, M.D.

Grand Rapids, March 15, 1893.

Correspondence.

COLD EXTREMITIES.

Since the discovery by Claude Bernard, in 1848, of the glycogenic function of the liver, and soon thereafter of its nervous connection with the floor of the fourth ventricle, the treatment of the pathological conditions of that important gland have been approaching an intelligent basis.

We now know that diabetes is not a kidney disease, and that it is probably a liver disease. The liver produces too much glucose, or there is deficient combustion of it. Glycogen or glucose, having a formula of $(C_6H_{10}O_5) + H_2O$, is a carbohydrate, closely allied to sugar and starch. Four pounds of this substance is produced every day by the liver, and the blood normally contains 1½ to 2½ parts in 1,000. This large amount of glucose is destroyed by combustion, and is the chief source of animal heat.

The liver is not only the coal-house, but the coal-bank, in which the great alchemist Nature is constantly renewing the supply of carbon that keeps alive the fires that warm the body.

If from lack of blood of proper quality, or inefficient nerve stimulus, or from disease of the liver itself, we have a diminished quantity of glucose produced, so that the amount in the blood sinks to one part or less in a thousand, we have that very numerous class of patients who always have cold hands and feet. The limited amount of fuel in the blood is consumed before it reaches the hands and feet; hence the cold extremities. If the glucose is still more reduced, we have the general chilliness requiring extra clothing during the day and extra covering at night, and inability to resist the fall of temperature.

To meet such a condition where the cause cannot be discovered, or if known cannot be removed, our best remedy is phloridzin, a glucoside derived from the roots of apple, pear, and cherry trees, which is transformed directly into glucose within the animal economy independent of the action of the liver.

I will add that in diabetes I have found the following prescription to promptly re

duce the flow of urine and relieve the thirst:

℞ Strych. sulph., gr. j.
Ferri sulph., }
Ergotin, } ää gr. xxiv.

M. Ft. in mas. et div. in pil xxiv. S.: One four times a day.

Respectfully,
G. A. HARMAN, M.D.

Lancaster, O., March 21, 1893.

A METHOD OF CAPITAL PUNISHMENT.

Editor MEDICAL AGE:

Since there is at the present time so much controversy for and against capital punishment, and since our present methods are so objectionable to some, I concluded to publish my idea of a mode of execution which would be at once speedy, bloodless, and without suffering. Personally I am a believer in capital punishment, for it would seem that the man who willfully and without just cause kills another is not worth living. This statement I make without repeating the pleadings of each side, and simply wish to add that in my opinion neither capital punishment nor imprisonment will prevent or lessen crime.

When we consider the different modes of execution, we find that all, at least to some extent, are objectionable or horrible. In hanging we have almost a perfect method, provided however that the neck is broken and death follows speedily; otherwise suffering is intense and of long duration. With the guillotine we have a quick, but a most horrible and bloody operation; while the effect of electrocution is also rather cruel and uncertain, from the fact that there exists a great difference of susceptibility to the effect of this agent in different individuals. I believe all these objections would be overcome by resorting to a more certain method: and by that I mean separation or cutting of the spinal cord at its exit through the foramen magnum of occiput, by means of a sharp instrument. My idea of performance is to put the subject into an adjustable chair, and have a sharp spring-lance fastened to the back of the chair, its point resting over the space between atlas and occiput. By releasing the spring, the knife will enter between the bones and sever the cord, thereby causing instant death. This practically is the method by which cattle are killed, and one that never fails. It virtually substitutes successful hanging, as it interrupts immediately all nerve force and thereby life. The most timid could witness such an execution without horror.

This is indeed a strange communication to offer; but as the subject is now stirred up, and since I notice a few remarks in your journal on electrocution, I deemed it worthy of mention. A. F. HINZ, M.D.

Minneapolis, Minn.

AMERICAN ACADEMY OF MEDICINE—PRELIMINARY PROGRAMME OF THE MEETING FOR 1893 AT MILWAUKEE.

Saturday Morning, June 3d, at 10 o'clock.—Executive Business. Reports of Committees: (1) On Eligible Fellows; (2) On the Requirements for Preliminary Education in the various Medical Colleges in the United States and Canada; (3) On the Comparative Value of Academical Degrees. Papers: (1) "The Attitude of our Medical Schools in Relation to Preliminary Studies." R. Lowry Sibbet, Carlisle, Pa. (2) "What Mental Faculties should be Specially Trained for the Study of Medicine?" James W. Moore, Lafayette College. (3) "The Classics and the Common Schools." J. Berrien Lindsley, Nashville, Tenn.

Saturday Afternoon at 2.30.—President's Address. Papers: (1) "What should be Required in an Entrance Examination to a Medical School?" James W. Holland, Jefferson Medical School. (2) "Should there be Elective Studies in a Medical Course?" P. S. Conner, Medical Department, Dartmouth College. (3) "On the Endowment of Medical Schools." George M. Gould, Philadelphia.

Re-union Session, Saturday evening.

Monday Morning, June 5th, at 10 o'clock.—Executive Business. Report of Committee on the Laws Regulating the Practice of Medicine. Papers: (1) "The Duty of the State to Medicine." Benjamin Lee, Philadelphia. (2) "The Importance of the Study of Medical Sociology." Charles McIntire, Easton, Pa. (3) Title to be announced later—C. C. Bombaugh, Baltimore.

There will probably be time at the meeting for the reading of two or three papers more than are now on the programme. Fellows who desire to contribute such papers are requested to send the titles to the Secretary.

Some of the papers are promised provisionally and are announced with this understanding.

A BUREAU OF INFORMATION AND SERVICE.

At a meeting of the Joint Committee of the Chicago Medical Profession on World's Fair Entertainment, held at the Sherman House, November, 1892, the establishment of a bureau of information and service was delegated with approval and endorsement to Chas. Truax, Greene & Co., the committee reserving to itself the duty of such social entertainment of visiting physicians during the continuance of the Exposition as may seem desirable.

This action was confirmed at the final meeting of the Joint Committee, Feb. 25, 1893, and, on application of the Practitioners' Club and the South Side Medical Club, the matter of social entertainment was delegated to them, with full authority to act in the capacity of entertaining bodies, with the retention of the chairman and its American and foreign secretaries already appointed.

The American secretaries are: Dr. Archibald Church, Dr. Geo. Henry Cleveland, Dr. John C. Cook, Dr. J. C. Culbertson; British secretary, Dr. Sanger Brown; German, Dr. F. C. Hotz; French, Dr. Fernand Henrotin; Spanish, Dr. E. J. Gardiner; Italian, Dr. A. Lagario; Swedish, Dr. K. Sandberg; Canadian, Dr. R. D. McArthur; Russian, not yet chosen.

The scope and duties of the above secretaries will be designated in the future.

C. WARRINGTON EARLE,
Chairman.

GENERAL MEDICINE AT THE GREAT CONGRESS.

The Pan-American Medical Congress promises to be one of the most important events in the history of medicine in the Americas. Its success is assured by the large number of valuable papers already promised. The Section on General Medicine, which is one of the most important that have been created, bids fair to be one of the most successful in the entire Congress; and already many valuable contributions are in process of preparation, and will be read at the meeting in September. It is hoped, with the hearty coöperation of all physicians living not only in North but also in South and Central America, that the work in this Section will be memorable; and each physician living on this continent is requested to join this most important section, and to prepare a contribution to be read before that body. It is especially requested that those intending to join this section or to read papers shall at once send their names, with titles of papers, to the undersigned, so that they may be noted on the calendar and given their appropriate place.

DR. JUDSON DALAND, Sec'y,
319 South Eighteenth St., Philadelphia, Pa.

ORGANIZATION OF ANOTHER SECTION.

The Section on Dermatology and Syphilography of the Pan-American Medical Congress has been fully organized, having a list of eighteen honorary presidents and sixteen secretaries, representing the three Americas, the West Indies, and the Hawaiian Islands. The Executive President is Dr. A. H. Ohmann-Dumesnil, 5 S. Broadway, St. Louis, Mo. The two principal secretaries, in addition to the sixteen representative ones mentioned above, are Dr. Wm. S. Gottheil (English-speaking), 25 W. Fifty-third St., New York, N. Y., and Dr. John Forrest (Spanish-speaking), Charleston, S. C. The Advisory Council is made up as follows: Dr. T. B. Keher, 911 Chestnut St., St. Louis; Dr. E. B. Browson, 123 West Thirty-fourth St., New York; Dr. Jos. Zeisler, 125 State St., room 27, Chicago; Dr. J. P. Knoche, Kansas City, Mo.; Dr. W. T. Corlett, 333 Prospect St., Cleveland, O.; Dr. M. P. Vander Horck, Syndicate Block, Minneapolis; Dr. B. Merrill Rickets, 137 Broadway, Cincinnati, O.; Dr. H. W. Blanc, Sewanee, Tenn.; Dr. J. V. Shoemaker, 1519 Walnut St., Philadelphia; Dr. J. H. Bloom, Louisville, Ky.; Dr. H. W. Stelwagon, 1411 Spruce St., Philadelphia; Dr. J. C. McGuire, Washington, D. C. Communications, notices of papers, etc., should be sent to the Secretary,

DR. W. S. GOTTHEIL,
25 West Fifty-third St., New York City.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., APRIL 10, 1893.

Editorial.

MEDICINE AND BIOLOGICAL SCIENCE.

Lord Salisbury, in an address at Oxford, presents an able and generous tribute to the medical practice of modern times.

Lord Salisbury's estimate of the powers and achievements of medicine was as striking as it was generous. He spoke of the domain of medicine as the "field upon which the whole tendency of scientific thought seems to be concentrating itself," and of its privilege as witnessed in "works of mercy and the remedy of human calamity in its most overwhelming form." It were uncandid to deny that in our ranks there has been some soreness in this matter. Some have not hesitated to say, likewise, that medicine "has scarcely received among us all the tribute which it ought to receive;" others of us, who have been content to find in its service their full reward, will nevertheless feel warmed at heart by words so cordial and so impressive.

The Chancellor of the University afforded the assurance that the University and the world are drawing closer to medicine, and urged unreservedly that an enlargement of hospitals would be a long step towards "the closer introduction of the cultivation of one of the greatest of the sciences—the science of medicine." This advance is desired for its direct effect upon the intellect.

The British Medical Journal, in commenting on this portion of the address, remarks:

"We believe his exclusive insistence upon the scientific side of our calling to be both timely and wise. We shall not be suspected of underrating the traditionary art of healing, or the rich experience of individuals, when we say, as lately said of all the arts, that although for a time art precedes science, yet a term arrives when practical craft can lead no longer, and science must take the lead. The time has come when our art must be thus stiffened, economized, and completed by that scientific investigation for which universities offer such rare opportunities."

THE GERM PLASM: A THEORY OF HEREDITY.

The British Medical Journal, March 18th, gives an interesting *résumé* of the views of Prof. Weismann, of Freiburg.

This investigator has thoroughly and consistently carried out a mechanical theory of heredity. He has proceeded on the principle that a theory of heredity which shall enable us to marshal the known facts of transmission and inheritance in terms of the structure of protoplasm must be sufficient to express all those facts, and further, that it should, when tested by deduction and confirmatory experiment, lead to the discovery of hitherto unrecognized facts. Prof. Weismann has, during the last ten years, published a series of essays setting forth his speculations and observations as they have proceeded. These have been translated into English. He has recently given an exposition of his theory of heredity in its definite and complete shape. The translation has been made by Prof. Weismann's son-in-law, Prof. Newton Parker, of Cardiff, and is published at the same date as the German edition.*

No biologist can read this book without admiration for the courage and determination which have led the author through all the immense difficulties of the problem into the final elaboration of his mechanical theory of heredity. It need hardly be said that the theory involves a number of new conceptions and new terms which render it by no means easy to grasp at the first attack; still less can it be expected to give a proper conception of it in a brief review. There can, however, be no doubt that the theory has to be mastered by all students of heredity, that it holds the field, and that future progress in our knowledge and conceptions concerning this all-important phenomenon, whether we are

* "The Germ Plasm: A Theory of Heredity." London: Walter Scott, Limited. 1893. 6s.

philosophic biologists, stock-breeders, or moralists, must proceed from Weismann as a basis.

It is not too much to say that, whether Prof. Weismann's theoretical views are ultimately accepted in their entirety (as is, of course, improbable) or not, there has been no work published since Darwin's own books which has so thoroughly handled the most important matter treated by him, or has done so much to place in order and clearness the immense complexity of the factors of heredity, or, lastly, has brought to light so many new facts and considerations bearing on the subject.

An idea of the nature of Weismann's theory of heredity may be formed when it is stated that he is confessedly on the side of the old school of "evolution" (not to be confounded with the modern doctrine of evolution) as opposed to that of "epigenesis." Living matter must be conceived of, according to his theory, as composed of ultimate units, which he calls biophors. Each biophor consists of hundreds of molecules. If we assume the diameter of a molecule to be the $\frac{1}{2000000}$th of a millimeter, and a thousand molecules to be packed into one biophor, the biophor would be $\frac{1}{2000}$th of a millimeter in diameter. A human blood-corpuscle would contain seven hundred million biophors. These lowest biological units, the "biophors," are supposed to be arranged into groups called "determinants." These, again, are definitely grouped in a third order of units called "ids," so called because they form the "iodoplasm," as opposed to the "morphoplasm," of the living cell. The ids build up the greater part of, if they do not wholly constitute, the nuclear rods or chromosomes which we can now distinguish with the microscope. These rods are called by Weismann "idants." The "germ-plasm," or hereditary substance of the metazoa and metaphyta, consists of a larger or smaller number of idants, which, in turn, are composed of ids. Each id has a definite and special architecture, being composed of determinants, which are themselves groups of biophors arranged in a certain order, the biophors differing in certain definite ways from one another in respect of their molecular constitution.

This, then, is the apparatus which Prof. Weismann finds it necessary to imagine. Given this triple set of biological units between the cell and the molecule, and it is possible—but not with a less complex mechanism—to frame a mechanical theory of heredity. As is well known, one of the necessary outcomes of this theory is that characters acquired by the action of the environment upon the individual cannot be transmitted. The facts of heredity and reproduction are treated in great detail in the present volume so as to formulate them in terms of the theory.

The scope of the treatment of the subject may be gathered from some of the headings of chapters—for example, regeneration, multiplication by fission, multiplication by gemmation, alternations of generations, the formation of germ cells, the nature of sexual reproduction or amphimixis, reversion in its relation to amphimixis, dimorphism and polymorphism, the supposed transmission of acquired characters, variation.

CHIAN TURPENTINE IN CANCER.

Among the many therapeutic experiments for the cure of cancer, perhaps there is none better than Chian turpentine employed in a rational manner. Prof. Clay, who is recognized as the chief sponsor of the turpentine treatment, claims to have made a number of complete cures of uterine cancer in advanced stage, and of rectal cancer and surface epitheliomata. Cancer of the breast has also been favorably modified by the use of this remedy, given in connection with sulphuric ether (see MEDICAL AGE, 1892, p. 31). Favorable reports have been made by other physicians, although it is not pretended that turpentine has yet acquired any title to recognition as a specific in carcinomatous affections. The reason of this, however, may reside perhaps not so much in the remedy itself as in the method of its administration. The emulsion form, which was employed by Prof. Clay, has since been superseded in some cases by a watery solution, which appears to possess the advantage of being strictly palatable, and exhibiting the curative properties of the drug in their unadulterated simplicity and through a process of almost artificially

rapid assimilation. Dr. A. Rabagliati, of Bradford, Eng., writes us concerning this method:

"The resin is soluble in spirit vin. rect. When it is so triturated and dissolved, it can be mixed so as to form a milky watery solution or mixture, and the insoluble resin can be filtered out by muslin. One ounce of the watery extract to a pint of hot water can be well taken an hour and a half before food, and is well borne even by delicate stomachs. This prevents the absurdity of administering in pills which quietly pass through the intestines unchanged. I have taken the watery mixture in this way myself, so I know. Medicines passed through a large volume of hot water and given on an empty stomach are infinitely more powerful than in pill, or in small doses of cold water either before or after food. I have been using tar-water and syrupus picis (U. S. A.) in above way for some time with good (and I believe it will turn out even startling) results."

THE PREVENTION AND TREATMENT OF CHOLERA.

This is too large a subject to discuss *in extenso*. One may, however, condense the general opinion, as voiced in the home and foreign medical press, tersely as follows: Cholera cannot attack a person unless the germs of the disease enter the mouth, pass unchanged through the stomach, and reach the intestines. 212° F. of heat will kill cholera germs; therefore boil all water, and eat only well-cooked and hot food. Let brandy and alcoholic stimulants alone. Keep your person and your surroundings absolutely clean. Wear proper underwear, and rubbers and water-proof when it rains, which will prevent chilling during the rapid changes of temperature—chilled bowels are a ripe field for cholera. Keep food in perfectly clean, covered vessels; water in stoppered bottles on ice.

In hot weather disinfect sinks and all standing basins. The dwelling should be thoroughly ventilated at least once a day. It is wise to eat one's meals at home.

Medicinally, acid drinks are prejudicial to cholera germs—solutions of salicylic or tannic acid, for example. Salol and many antiseptics are recommended for direct local application and a sterilized solution of chloride of sodium for intravenous injection.

Book Notices.

A System of Genito-Urinary Diseases, Syphilology, and Dermatology: By Various Authors. Edited by Prince A. Morrow, A.M., M.D., Clinical Professor of Genito-Urinary Diseases, formerly Lecturer on Dermatology in the University of the City of New York, Surgeon to Charity Hospital, etc. With illustrations. In three volulmes. Vol. I: Genito-Urinary Diseases. Published by D. Appleton & Company, New York. 1893.

Owen Meredith has well said in one of his most delightful of poems:

"The age is gone o'er
When a man may in all things be all. We have more
Painters, poets, musicians, and doctors, no doubt,
Than the great Cinquecento gave birth to;
Our own age
Is too vast, and too complex, for one man alone
To embody its purpose, and hold it shut close
In the palm of his hand."

The scholarly editor of this vast work, Dr. Prince A. Morrow, has expressed this sentiment very happily in prose when he says in his preface:

The genius of modern medical literature is clearly in the direction of division of labor and associated effort. The marked favor with which the numerous "systems" and "cyclopædias" which have appeared in recent years have been received by the profession would seem to show that the composite treatise represents the ideal method of bookmaking. In fact, coöperation is the essential condition of thoroughness and completeness in a work covering a wide range of subjects.

The field of research in every department of medicine has grown so large that it is hardly possible for any one individual to carefully sift from the mass of new material accumulated by the great body of workers the facts and opinions which represent a distinct advance in our knowledge and have a definite and permanent value.

Especially is this true of the three associated departments of general medicine and surgery embraced in *this* system. The evolutionary requirements of these specialties demand a new and standard work which shall embody the numerous and important additions made to our knowledge of the subjects they embrace, and at the same time be sufficiently comprehensive to serve as a compendium of reference.

The editor has sought to attain this object by enlisting the coöperation of distinguished specialists, each of whom has been selected

for his special fitness to write on the subject assigned, and which has been, as far as practicable, the subject of his choice. Especial effort was made, by clearly defining the ground each article was to cover, to avoid overlapping of subjects and useless repetition, and at the same time secure an organic unison of the completed work, thus making it, as nearly as possible, as coherent and connected as if written by one individual.

It was impressed upon each contributor that, while his article was to be written from his own independent standpoint, the work designed to be, first of all, thoroughly practical and adapted to the wants of the general practitioner as well as the specialist. With this object in view, it was recommended that the subjects of diagnosis and treatment should be presented fully and in a clear and practical light.

The authors are responsible for the views expressed in their respective articles, and to them is due the credit for whatever value the work may possess.

The editor assumes the responsibility of the general plan and arrangement of the work and the articles bearing his name.

In Volume One it will be observed that new material not ordinarily found in text-books on genito-urinary diseases, but of great practical interest and value, has been introduced; such as the chapters on functional disorders of micturition and their relation to various morbid states, the diagnostic significance of pathological modifications of the urine, urine-analysis, uro-genital tuberculosis, etc. In addition, the complete monographs on endoscopy and cystoscopy contain elaborate and exhaustive presentations of the latest knowledge respecting these valuable aids to diagnosis and treatment.

The idea of grouping genito-urinary diseases, syphilis, and skin diseases as proper subjects of associated study had its origin in this country, and it seems eminently fitting that the fruitful results of this idea should be presented by American writers.

It was found necessary, in order to compress the volume within reasonable limits, to omit the extensive and very complete bibliographies which accompanied many of the articles.

Certainly the scope of the contemplated three volumes, judging from the first volume before us, is a herculean task, and the result likely to be an expression of opinion from a galaxy of stars in the medical firmament that are well fitted to illuminate the subjects they are to cover.

It is a magnificent undertaking of the enterprising publishers, to place before the medical profession so admirable a collection of sentiment concerning such important branches of practice as genito-urinary diseases, syphilology, and dermatology.

It is due to the publishers to state that they have shown a commendable liberality in having executed in the best and most artistic manner the numerous illustrations which form an attractive feature of the work and serve so valuable a purpose in the elucidation of the text.

The contents of Volume I are as follows:

Anatomy and Physiology of the Genito-Urinary Organs, by George Woolsey, M.D. Diseases of the Penis, by Ramon Guiteras, M.D. Diseases and Injuries of the Urethra, by F. Tilden Brown, M.D. Etiology of Urethritis, by S. Lustgarten, M.D. Acute Urethritis—Gonorrhœa, by George Emerson Brewer, M.D. Chronic Gonorrhœa or Gleet, by William K. Otis, M.D. Endoscopy, by Hermann G. Klotz, M.D. Gonorrhœal Ophthalmia, by Joseph A. Andrews, M.D. Gonorrhœal Rheumatism, by Frank Hartley, M.D. Gonorrhœa of the Rectum, Nose, Mouth, Ear, Umbilicus, and Axilla, by James P. Tuttle, M.D. Stricture of the Urethra, by J. William White, M.D. Diseases of the Prostate, by W. T. Belfield, M.D. The Functional Disorders of Micturition, by Joseph D. Bryant, M.D. Diagnostic Significance of Pathological Modifications in the Urine (including the most practical methods of urine-analysis), by Eugene Fuller, M.D. Urinary Fever, by J. A. Fordyce, M.D. Cystoscopy, by Willy Myer, M.D. The Cystites, by Samuel Alexander, M.D. Injuries and Diseases of the Bladder, by George Ryerson Fowler, M.D. Rupture of the Bladder, by Alexander W. Stein, M.D. Tumors of the Bladder, by Francis Sedgwick Watson, M.D. Stone in the Bladder, Prostate, Urethra, and Ureters, by Arthur T. Cabot, M.D. The Surgical Diseases of the Kidney, by Lewis A. Stimson, M.D. Tuberculosis Uro-Genitalis, by John P. Bryson, M.D. Diseases of the Scrotum, by Charles W. Allen, M.D. Diseases of the Testicle, by James Bell, M.D. Diseases of the Testicle, by Edwin C. Burnett, M.D. Diseases of the Testicle, by John P. Bryson, M.D. Hydrocele and Spermatocele, by John A. Wyeth,

M.D. Varicocele, by Edward L. Keyes, M.D. Diseases of the Seminal Vesicles, by Paul Thorndike, M.D. Functional Disorders of the Male Sexual Organs, by Prince A. Morrow, M.D. Gonorrhœa in the Female, by Andrew F. Currier, M.D.

HYDROTHERAPY AT SARATOGA: A Treatise on Natural Mineral Waters. By J. A. Irwin, M.A., Cambridge, Eng.; M.A., M.D., Dublin University; L.M., College of Physicians, Ireland; Member of Royal College of Surgeons, England; Member of the British Medical Association; Fellow of the London Obstetrical Society, and the New York Academy of Medicine, etc.; formerly House Surgeon Royal Free Hospital, London; Medical Officer Shropshire and Montgomeryshire Counties Lunatic Asylum; and Physician to the Manchester Southern Hospital for Women and Children. Published by the Cassell Publishing Company, New York.

Dr. Irwin prefaces his book by this ode to mineral springs, which he credits to Lobkowitz—trans. Johnson:

> Sacred Fonts! flow on forever,
> Health on mankind still bestow;
> If a virgin woo thee, give her
> Rosy cheeks and beauty's glow;
> If an old man—make him stronger;
> Suffering mortals soothe and save;
> Happier send them home, and younger,
> All who quaff thy fervid wave.

The United States, in so many respects exceptionally gifted, possesses already more than eight thousand known mineral springs, of which about eight hundred have been analyzed, and not a few found equal, if not superior, to those of highest repute in the old world.

The purport of this work is to establish among educated readers a correct and unprejudiced valuation of mineral waters generally, and those of Saratoga in particular.

The professional reader also may find information not without interest and practical value; and, although some points are left untouched, or still in doubt, it should be remembered that, as in all other branches of knowledge, "not directly, but by successive approximations, do mankind reach correct conclusions."

The author presents an interesting story of the richness of this country in mineral waters, their methods of utilization and the conditions to which they are applicable therapeutically. He covers the subject in twelve chapters devoted *seriatim* to: Saratoga; The Origin of Mineral Waters; Geological Conditions at Saratoga; Classification and Analysis; Component Parts of the Saratoga Waters; Metabolism and Alterative Effects; Balneology, or the Secret of Bathing; Therapeutic Applicability and Dietetics; A Practical Division of Saratoga Waters; General Precepts; Nosology; and devotes his concluding chapter to Bottled, Recharged, and Artificial Mineral Waters.

THE SURGICAL ANATOMY AND SURGERY OF THE EAR. By Albert H. Tuttle, M.D., S.B. [Harv.], of Cambridge, Mass.; Member of the Massachusetts Medical Society; Member of the American Medical Association; Secretary of the Boston Gynæcological Society; Secretary of the Cambridge Medical Improvement Society; Member of the Harvard Medical School Association; Member of the Lawrence Scientific School Association, etc. With twenty-eight original illustrations, reproduced from the writer's drawings from nature. Published by George S. Davis, Detroit, Mich. 1892.

This is an excellent consideration and study of diseases of the ear, first from the anatomical and then from the therapeutical point of view. It is much enriched by twenty-seven elegantly finished half-tone engravings, prepared from original designs of the author.

In five chapters the author very clearly and succinctly treats of: The Anatomy of the Ear; The External Ear—Diseases and Treatment; Operations for the Removal of the Ossicles and Membrana Tympani; Diseases and Operations on the Mastoid, and Necrosis of the Temporal Bone; Meningitis, Cerebral and Cerebellar Abscess, Thrombosis of the Cerebral Sinuses, Phlebitis, with Surgical Treatment.

Altogether the book, based as it is on elaborate anatomical investigation, is one which the student, the general practitioner, and the aural specialist may profit by reading, and affords at a price that is inconsiderable a fundamental guide to the proper diagnosis and treatment of a class of diseases the successful relief of which will much redound to the credit of those who thoroughly familiarize themselves with the methods inculcated by Dr. Tuttle.

CONTENTS OF SCRIBNER'S FOR APRIL, 1893.

A Century Ago. Frontispiece. Drawn by A. B. Wenzell.

An Artist in Japan. By Robert Blum. Illustrations by the author.

Epitaph. By Graham R. Tomson.

An Irish Peasant Song. By Louise Imogen Guiney.

Unpublished Letters of Carlyle.

A New England Farm. By Frank French. Illustrations drawn and engraved by the author.

The One I Knew the Best of All: A Memory of the Mind of a Child. By Frances Hodgson Burnett. Chapters XI–XII. (Begun in January—to be continued.)

The Restoration House. By Stephen T. Aveling. Illustrations by Harry Fenn and V. Pérard.

Worth While. By Edward S. Martin.

In Rented Rooms. By George I. Putnam.

The Cities that Were Forgotten. By Charles F. Lummis. Illustrations by J. H. Twachtman and V. Pérard.

A Glimpse of an Artist. By Viola Roseboro.

Anne of Brittany's Châteaux in the Valley of the Loire. By Theodore Andrea Cook. Illustrations by O. H. Bacher, and from photographs; engraving by Van Ness, E. H. and G. Del'Orme.

The Arts Relating to Women, and their Exhibition in Paris. By Octave Uzanne. Illustrations by W. L. Metcalf.

Historic Moments: The Crisis of the Schipka Pass. By Archibald Forbes.

The Point of View. Outrageous Fortune—A Question of Definition—The Old and the Young.

CONTENTS OF THE ATLANTIC MONTHLY FOR APRIL, 1893.

Old Kaskaskia. Part Fourth. By Mary Hartwell Catherwood.

Unpublished Correspondence of William Hazlitt. By William Carew Hazlitt.

The American Out of Doors. By Gamaliel Bradford, Jr.

My College Days. II. By Edward E. Hale.

A Thought. Suggested by the death of Fanny Kemble. By John Hall Ingham.

Vittoria Colonna. By Harriet Waters Preston and Louise Dodge.

Miss Tom and Peepsie. By A. M. Ewell.

Some Pelham-Copley Letters. By Paul Leicester Ford.

Survival. By Florence Earle Coates.

Phillips Brooks. By Alexander V. G. Allen.

The Country Unexplored. By Stuart Sterne.

Immortality. By Arthur Sherburne Hardy.

Architecture Among the Poets. By Henry Van Brunt.

Betwixt a Smile and Tear. By Edith M. Thomas.

Money as an International Question. By E. Benj. Andrews.

The Dawn of Italian Independence.

The Influence of Sea Power upon the Freach Revolution.

Comment on New Books.

The Contributors' Club.

CONTENTS OF NEW ENGLAND MAGAZINE FOR APRIL, 1893.

Trinity Church, Boston. By Phillips Brooks.

Description of Trinity Church. By H. H. Richardson.

Memories. By James G. Burnett.

Silas Deane and the Coming of Lafayette. By Georgianna A. Boutwell.

The Kiss of Children. By Charles Gordon Rogers.

Some Historical Aspects of Domestic Service. By Lucy M. Salmon.

Two Women. By Ida Worden Wheeler.

The Boston Camera Club. By Benjamin Kimball.

Humility. By Frank H. Sweet.

Biennial Elections and Legislative Sessions. By Raymond L. Bridgman.

An Easter Prayer. By Minna Irving.

Plain Words on Protection. By Arthur Latham Perry.

Andy Rick's Handy Tricks. By Lynn R. Meekins.

The Convict who Escaped. By Joseph Percival Pollard.

After the Quarrel. By George H. Westley.

The City of Buffalo. By Frederick J. Shepard.

John Ballantyne, American. VI–VII. By Helen Campbell.
Editor's Table.

THE STUDENTS' QUIZ SERIES. Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Clinical Lecturer on Surgery, College of Physicians and Surgeons, New York. Volume VIII: Diseases of the Skin, by Charles C. Ransom, M. D., Assistant Dermatologist, Vanderbilt Clinic, New York. Pocket size, 12mo., 192 pages, 28 illustrations. Limp cloth, $1.00. Philadelphia: Lea Brothers & Co. 1893.

This volume on Diseases of the Skin is written in accordance with the most modern views concerning its specialty. Its alphabetical arrangement secures the utmost facility in use. In its closing pages will be found the classification of the American Dermatological Association, and a large number of selected prescriptions recommended by eminent authorities as possessing especial value.

* * *

ELEMENTARY PHYSIOLOGY FOR STUDENTS. By Alfred T. Schofield, M.D., M.R.C.S.; late House Physician to the London Hospital; Special Lecturer National Health Society. In one handsome 12mo. volume of 385 pages, with 227 engravings and two colored plates. Cloth, $2. Philadelphia: Lea Brothers & Co.

This is another number of the Students' Quiz Series. The author devotes three brief chapters to terminology and symptomatology; distribution and configuration and definitions; anatomy of the skin. He takes up *seriatim* the diseases of the skin, classification of diseases of the skin, and concludes with a fourteen-page supplement of formulæ.

INFORMATION FOR AUTHORS: Hints and Suggestions concerning All Kinds of Literary Work: By Eleanor Kirk, author of "Periodicals that Pay Contributors," "The Woman's Way to Health and Beauty." Third Edition. Published and for sale by the author. Brooklyn, N. Y.: Bureau of Correspondence and Criticism, 698 Greene Ave. 1893.

A neat and readable little book, covering such topics as the literary life; appearance of manuscript; methods of literary work; literary qualities of manuscripts; varieties of literary work; editors; book-making; the author-publisher; a representative publication; proof-revision, etc.

Notes and News.

The "Esposizione" of the International Medical Congress.—

An Italian correspondent, under date of Rome, March 5th, writes: "Among the many features in which the organizing committee are working to make the coming Congress a distinct advance on its predecessors is that of a medical exhibition, 'which shall place on view, conveniently arranged and effectively catalogued, every article, object, appliance, or appurtenance of the healing art in its widest acceptation.' A special 'Comitato Esposizionario' has just been appointed *ad hoc*, including such representative names as that of the Commendatore Professor Pagliani, Director of Public Health; Signor Bentivegna, the distinguished engineer; Signor Marzari, a public auditor of approved ability; and others not less fit for the work of organization. Professor Pagliani is its president, and under his energetic auspices circulars inviting the contribution of specimens of every kind of medical *matériel* are now ready for transmission to pharmaceutists, surgical-instrument makers, food manufacturers, wine growers, mineral-water agents—to all, in short, who cater for the professional requirements of the practitioner. Many of these specimen-contributions, indeed, are on their way to the 'Esposizione,' their contributors being, not unnaturally, interested in securing an advantageous *locale* for their contributions. The alimentary and wine departments will, I have good reason to know, be richly represented not only by Italian purveyors and by British houses established in Italy, but by those of other nationalities—Swiss, Austrian, and German, in particular. For all contributors from abroad, the Commendatore Pagliani is exerting his great influence—parlimentary, social, and professional—to secure facilities for the convenient consignment of their wares *en route* to the Exposition, by reducing railway charges and minimizing custom-house formalities to the vanishing point. That the 'Esposizione' shall be 'la nota saliente' (the outstanding feature) of the Eleventh International Congress of Medicine and Surgery, is the avowed object of the Commendatore Pagliani and his

coadjutors on the committee, and certainly they are sparing no effort to be as good as their word."—*Lancet*, March 11, 1893.

Tea, Coffee, and Cocoa.—

Every point scored for temperance is a gain to national health, and we have satisfaction in noticing such an advance as is indicated by a lecture delivered recently by Dr. W. Woodward on behalf of the Worcestershire Health Society. The subject was "Tea, Coffee, and Cocoa." As might have been expected, the first-named of these beverages received the largest share of consideration. Its varieties, its different qualities, its chemical properties, its modes of preparation true and erroneous, were discussed at some length and with the happy result that it may still be regarded as a wholesome stimulant and restorative of the nervous system which, if properly made and used in moderation, is guiltless of after ill-effects. A comparison between the different known methods of preparing tea is of some general interest; the Japanese plan—which allows infusion for about a minute and a half, and which does not require boiling water, cream, or sugar—having evidently an attraction for the lecturer. For general use, however, he recommends the ordinary British custom, the infusion being drank whilst recent and not strong. In this country we stand in equal, if not greater, need of teaching in regard to the qualities and preparation of coffee and cocoa. The former of these wholesome luxuries was treated of in considerable detail. We should have welcomed a somewhat fuller exposition of the properties and uses of the latter. A recommendation of cocoa in the nourishment of infants is, however, noteworthy and should prove of some practical service. The question of cost was not forgotten. The estimate of a cup of good tea (⅛*d.*) and of good coffee (⅓*d.*) is instructive when the prices charged in many restaurants for infinitely poorer stuff are held in mind.—*Lancet*, March 11, 1893.

Parasitic Origin of Cancer,—

The last two sittings of the Pathological Society have been occupied with an interesting discussion on a paper by Jackson Clarke dealing with the parasitic origin of malignant cancer and sarcomatous diseases. In recent years the evidence on this point has been gradually growing stronger and stronger, and the attention of pathologists has been more and more drawn to the consideration of certain forms of organisms that have been described as present in cancer. Scheuerlen first ascribed the symptoms of irritation to the presence of a bacillus—a bacillus which we now know is frequently met with in the skin and probably plays little part as an active ætiological factor in the production of cancer; then more recently it has been supposed (1) that budding fungi, (2) that psorosperms, or some similar parasite, might play a part in setting up the necessary process of irritation in cancer. Now, however, we find an observer coming forward to state that in both cancer and sarcoma an enormous number of spore-bearing organisms and free spores may be demonstrated in every specimen in these malignant growths. He maintains that they are not mere dividing protozoa, but that they are more or less closely related to the spore-bearing psorosperms. Such a contention naturally met with very considerable opposition, as its acceptance is almost equal to postulating that a large proportion of such tumors, hitherto recognized as being degenerated cells, giant cells, and invading leucocytes, must be looked upon as being parasitic psorosperms in various stages of development. Whatever the immediate outcome of the discussion may be, it can ultimately lead to nothing but good, as it will necessarily draw the attention of a considerable number of histologists to an aspect of the pathology of malignant disease which, though studied by individual observers, has not yet been generally considered.—*Lancet*, March 11, 1893.

Music as an Aid to Medicine.—

Music, which has of late been sending forth new trial-shoots in the field of therapeutics, was again brought under the notice of the profession in this connection by Dr. J. G. Blackman in the January number of the Medical Magazine. Defined by this author as the language of sounds, its effects are briefly stated to consist in the production of motion, with liberation of nerve force and a generally pleasant result. The observa-

tions of Dogiel are again quoted as proving its regulating effect upon the circulatory system and its consequent close relation to tissue nutrition. It is doubtless in this way that its exhilarating or calmative influence in conditions of mental disease may best be explained. The article above mentioned is interesting to us as conveying the first definite statistical evidence we have met with respecting the employment of music in clinical medicine. The observations of Dr. J. Ewing Hunter at the Helensburgh Hospital go to show that, amongst the obvious effects of its use, relief of pain has in many cases been most marked, and we are also informed that rapid reduction of temperature in a case of peritonitis appeared to have a similar origin. Of course we must in all such cases make due allowance for the possibility of a *post* and *propter hoc* fallacy, and we should certainly exceed every known sanction of science if we were to claim for music a distinctly curative influence in organic lesions. Nevertheless, the fact remains that healthy nerve-tone has much to do with tissue nutrition, and that music as a recognized agent in its production has thus far a place—albeit a subordinate one—amongst the extra-pharmacopœial remedies available for the purposes of the physician. —*Lancet*, March 11, 1893.

Doctors and Hotels.—

Every person of sensitive morals, and a good many with only every-day sensibilities, would be shocked if the whole story of the relation of doctors to hotels were written. There is a fashionable hostelry in this town where the hotel doctor charges seven dollars a visit, and we much mistake if the hustling landlord does not get two of it. We have heard it stated on good authority that in many hotels the official doctor is obliged to give up from one-fifth to one-third of his charges to the business management. People who are taken ill in hotels feel particularly alarmed. They must have a doctor, and are not disposed to question about terms. They do not find out what these are until they come to settle the bill, and then expostulation is too late.

We cannot understand how honest men can connive at these hotel methods. To charge an extra fee in order to satisfy the extortion of the landlord is, in plain words, robbery. We have no specific code of ethics, but there is a standard of right and wrong of which most people see the justice and need. Doctors who do not follow it should be exposed, and the opinion of their professional brethren made known. This is not only right, but will sooner or later be imperatively demanded, or the public will protest, and the honor and honesty of the profession will be impeached.

Doctors should not divide extortionate charges with hotel-keepers, and all who do should not be considered honorable men or regular members of the profession.—*Medical Record*, March 18, 1893.

The Liability of a Corporation to Pay a Physician.—

The question of the legal liability of a corporation to compensate a physician called in by it to attend an injured employé, is discussed by L. D. Bulette in the International Medical Magazine. If a person requests a physician to attend a patient, there is no implied promise to pay, unless the relation of that person to the patient is such as raises a legal obligation on his part to call in a physician; consequently the physician summoned to treat an employé of a corporation cannot, on that account, demand payment from the company unless the person summoning has been authorized to do so. In a case cited in Missouri, the judge, in delivering the opinion of the Court of Appeals, says among other things that no implication arises where one calls in a physician to attend upon a stranger or upon one for whom there is no legal obligation to furnish necessities. It has even been held that a special request of a father to a physician to attend his son in his house implied no obligation to pay, if the son was over 21 years of age. Even if a corporation agrees to pay the physician who is called, it does not necessarily bind itself to pay for subsequent visits. It is the duty of a physician to learn the true legal status of the patient; he cannot rely upon any seeming legal and necessary dependence of his patient upon the person calling him in.—*Boston Medical and Surgical Journal*, March 16, 1893.

Mallein, the New Diagnostic for Glanders.—

Kalning, of Dorpat, discovered recently an extract from the bacillus mallei which could be employed to make the diagnosis of glanders in a manner similar to the use of Koch's tuberculin for tuberculosis; but his unfortunate death from the disease he was studying ended his experiments. Preusse, of Dantzig, independently made similar experiments. In Berlin, Pearson has been investigating the same subject, and others have followed, with the result of confirming the results of the previous workers, so that we may now hope that a reliable and harmless method of discovering glanders in animals before any definite symptoms are to be found has been put in our hands. The importance of such a discovery is also great from its corroborative evidence on the tuberculin question.—*British Medical Journal* (*International Medical Magazine*, March, 1893).

The Enlargement of Hoffman Island.—

A bill has been prepared by the Quarantine Commissioners calling for an appropriation for the enlargement of Hoffman Island, by extensions 150 feet long on its easterly side and 500 feet on the northern end. On the latter it is proposed to build a hotel with accommodations for five hundred cabin passengers, which will be isolated from the present docks. Until this is ready it is proposed to retain the Surf Hotel at Fire Island. The bill also calls for an appropriation for the construction of buildings on the easterly extension of the island, to shelter 1,500 more steerage passengers than the present accommodations for 1,200. The commissioners ask, in addition, for a further appropriation for a three-story fire-proof hospital building on Swinburne Island in place of the two frame wards there.

Meeting of the Georgia Society.—

The forty-fourth annual session of the Medical Association of Georgia is to be held in Americus, Georgia, April 19, 20, and 21, 1893. Members of the medical profession are cordially invited to attend. An extensive and varied preliminary programme has been issued in view of the coming event.

Therapeutic Brevities.

A New Method of Rapidly Removing t Uterus.—At a recent meeting of the Kans City Academy of Medicine, Dr. Emory La phear described a new method of abdomin hysterectomy. The abdomen and vagin having been carefully sterilized, an incisio is made in the median line, terminating close to the pubes as possible. The uteru with one tube and ovary, is drawn to or side, and a clamp is applied to the broad lig ment, which is securely ligated half an inch b yond and cut through between the two. Th procedure is repeated upon the opposite sid The uterus can now be lifted up into th wound and be easily separated from bladd and rectum. The incisions are carried ant riorly and posteriorly into the vagina, whe the clamp of Kelly or that of Polk is intr duced through the vagina and applied to th broad ligament as closely as possible to th uterus, and the opposite side is treated sim larly, when the uterus is quickly cut awa with curved scissors. The pelvis is irrigate and the abdominal wound closed, and drai age through the vagina provided for as cases of vaginal hysterectomy. The clam are removed at the expiration of forty-eig hours. The operation can be performed twenty-five or thirty minutes, and much mo easily than vaginal hysterectomy with clamp It is thought not necessary to unite the bla der to the rectum, as union takes place ju as quickly without sutures as with them.— *Medical News*, March 18, 1893.

Antifebrin Administration.—Dr. J. C. M Mechan writes to Merck's Bulletin: Ant febrin does not mix well with wine, whiske or alcohol, unless a considerable quantity these fluids be used to dissolve it. Of cours to adults it may be given in powder or ca sule; but the way I give it, especially children, and sometimes to adults, is mucilage of acacia. Suppose I wanted give three grains at a dose, I would write th following prescription:

℞ Antifebrin, gr. xlviij.
Acacia mucilage, } aā ℥ j.
Syrup, }

M. Sig.: Teaspoonful (5 grammes) every thr hours.

This makes a beautiful white mixtu which is pleasant to take.

Of course, the amount of antifebrin ma be increased or decreased as desired, a other ingredients may be added. Howeve the amount of mucilage should always r

ain the same in the prescription, but the ıantity of syrup may be reduced if desired. I have found the above such a desirable ay of administering antifebrin that I deem my duty to report the fact.—*Medical Re-ew*, March 18, 1893.

Cascara Sagrada as a Tænifuge.—Dr. W. H. otherl, Cincinnati, Ohio, reports the follow-g case of the successful use of cascara grada as a tænifuge: He says: "I wish to form you of a peculiar occurrence which ıppened in my practice with the use of fluid ıtract cascara sagrada (bitterless, P., D. Co.'s). I had a patient subject to bilious tacks and who had always received great ıefit from the bitter cascara. He called ır some of those bitter drops, when I gave m the bitterless. He did not obtain the lief as on former occasions, but, upon my lvice, still continued, and on the third day e was suddenly taken with most urgent sire for stool, and, as this occurred at ght, he used a vessel. The peculiar sensa-on experienced at time of stool, together ith the enormous quantity, caused him to ıamine his stool, and it was found to con-ın a fair-sized tapeworm which had never ven any signs of its existence. The same ccurred in another patient, and I am now nvinced that cascara sagrada is a tæni-ıge."

Hay Fever.—Dr. Kyle's plan of treatment , he says, as follows: First, I cleansed the asal mucous membrane with an alkaline lution. I then applied to the sensitive reas, by means of cotton pledgets, an 8-per-ent. cocaine-phenate solution, keeping this contact with the parts for at least ten ınutes, followed by a spray of a solution f the same strength. The result was a ıminution of the hyperæsthesia, lessened ngestion, and relief of the constant oryza and sneezing that are so annoy-ıg in these cases. The treatment failed to enefit the cases in which there was marked ypertrophy. I then removed the thickened ıembrane, and the result was a partial relief. n cases characterized by reflex asthmatic ymptoms an 8-per-cent. spray of cocaine as used with most marked effect.—*Medical Vews*, Dec. 17, 1892.

An Agreeable Method of Administering Cod-iver Oil.—A combination of glycerin with od-liver oil, made by the Cod-Liver Oil Glycerine Co. of St. Louis, claims to have olved the problem of administering cod-iver oil so as to secure its medicinal and nutritive virtues, and entirely without offending the sensitive palates of invalids, adults, and infants. Freed from its disagreeable effects, it stimulates digestion, and can be mixed with all remedies desired, and is pleasant to the taste. This product is introduced in a novel way to physicians by its manufacturers, who send an aluminum pocket-piece free on request; and if an aluminum identification-coin be desired, it will be sent by the company, with the name and address of the physician engraved upon it, on receipt of 25 cents and report of experience in the use of the cod-liver oil and glycerin.

Extract of Beef in Hospital Practice.—The Huron-Street Hospital of Cleveland, Ohio, through its superintendent, announces that "Rex" brand extract of beef has been used exclusively in the hospital for the past year, and that it is of unusually fine flavor. It is recommended highly for use in nourishing invalids.

The most scrupulous care is exercised in the preparation of this beef extract. Each pound of the extract represents forty-five pounds of lean meat, and many physicians pronounce it the most nutritious and delicately flavored beef extract on the market.

The Cudahy Packing Co., South Omaha, Nebraska, will send a jar of it free to physicians who write for it.

Hyperidrosis of the Feet.—Kaposi recommends the following prescriptions for this annoying condition:

℞ Naphthol, gr. xxij.
Glycerin, gr. xlviij.
Alcohol, ℥ j.

Sig.: Apply night and morning; then dust.

Or the following:

℞ Pulv. naphthol, gr. v.
Pulv. amyli, ℥ j.

Every morning.

—*La Semaine Médicale.*

To Cut Short Whooping-Cough in Twenty-four Hours.—The Illustrated Medical Journal says that Dr. Moncorro treats pertussis with a 10-per-cent. solution of resorcin, by applying the solution every two hours to the periglotteal region with a throat-brush. The application is made four or five times at each seance. The theory of the treatment is that the disease is due to a micro-organism and affects primarily the larynx. Cultures of the micro-organisms have been destroyed by the smallest amount of resorcin.—*Texas Sanitarian* (*Medical Fortnightly*, March 15, 1893).

Medical Progress.

CHOLERA AND IMMIGRATION.—Secretary Carlisle to-day (March 13th) issued the new regulations regarding the precautions to be observed in admitting immigrants to the United States. They contain seventeen articles, the first ten of which are substantially the same as the regulations now in force. Articles 11 to 15, inclusive, are made to conform to the new laws affecting immigration, passed by the last Congress.

Article 11 says that no vessel bringing immigrants from ports where contagious or infectious diseases are prevailing shall be admitted to entry, unless it appear by the certificate of the consular officer at such port that said immigrants have been detained at the port of embarkation at least five days, under medical observation, in specially designated barracks or houses set apart for their exclusive use, and that their clothing, baggage, and personal effects have been disinfected before being placed on board. These restrictions will also be applied to vessels bringing immigrants from non-infected ports but who come from infected localities.

Article 12 requires that there shall be delivered to the Commissioner of Immigration at the port of arrival, lists of such immigrants, which shall state as to each of said passengers substantially what is now required by existing law, and these additional requirements: Whether the immigrant has paid his own passage or whether it has been paid by other persons, or by any corporation, society, municipality, or government; whether ever in prison or almshouse or supported by charity; whether a polygamist; whether under contract, express or implied, to perform labor in the United States.

Article 13 provides that such lists shall be accompanied by the foregoing interrogatories and answers thereto in the language of the immigrant, which shall be signed by him in the presence of the agent granting him transportation; and there shall be indorsed thereon, in the language of the immigrant, a notice that if upon his arrival in the United States it is found that such interrogatories have not been correctly answered, he will be immediately returned; also that he will be required to take oath of the truth of such answer if it be called for by the Commissioner of Immigration at the port of arrival in the United States, and that a false oath will subject him to a fine or imprisonment.

Article 14 provides that the immigrants shall be listed in convenient groups, and no one list or manifest shall contain more than thirty names.

Article 15 provides that in case of t failure of the commanding officer of t vessel to deliver to the Inspector of Imm gration lists or manifests, verified as afo said, containing the information above quired as to all immigrants on board, the shall be paid to the Collector of Customs the port of arrival the sum of $10 for ea immigrant qualified to enter the Unit States concerning whom the above inform tion is not contained in any list, as aforesa or said immigrant shall not be permitted to enter the United States, but shall be turned like other excluded persons.

These new regulations will go into effe on May 3, 1893.—*Medical Record*, March 1893.

SANITARY SUPERVISION OF SCHOOLS.—T Local Government Board of England h recently issued a circular, which has been i dorsed by the Massachusetts State Board Health, and which may, therefore, be consi ered as authority and representative of t work of boards of health in this directi The following are extracts from it:

"1. The diseases for which schools may closed or children excluded are such as cau infection from person to person—scar fever, measles, diphtheria, whooping-cou smallpox, and rötheln, in order of relati frequency. More rarely the same questi arises as to enteric fever and diarrhœal d eases, which spread mainly by agency local conditions, viz., infected school wat closets and outhouses.

"2. A universal principle is, that all ch dren infected are excluded, however lig the danger of infection may be to others.

"3. As to mumps and skin diseases, educ tional interests are to be considered mo than in the other affections mentioned; y if these should spread by allowing children go to school, the loss to children and scho would be greater than to exclude the i fected.

"4. Closure of schools is a grave step f sanitary authorities to take, and seldo should be undertaken except in an actu epidemic, nor then as a matter of routi nor unless there is a clear prospect of pr venting the propagation of disease not to attained by any other means.

"To decide, the fact of many pupi affected is not a reason; but if in a lar majority of families the first case be a pup and especially if among families far apa and attending the same school, school shou be closed, and if the infected cases can *proved* to have attended the school.

"5. The medical officer should prompt

rify the teacher of an infected pupil, and ishould be kept from school the length of me the medical officer specifies. School cers should *promptly* notify health authoriis of cases of contagious disease, no matter at *name* is used for the disease. Such cers during an epidemic should note any nptoms, such as shivering, headache, lanor (especially if sudden), vomiting, rashes, e-throat During scarlet fever or diphria epidemics, any sore-throat is suspius, and pupils should be excluded until e assurance is given by a physician.

'6. Commonly the failure to stop the read of an epidemic, especially among pils, shows continued attendance of unognized mild cases, and schools may have be closed.

'7. A matter of importance in deciding as closure is the opportunity for intercommunication of pupils outside the school. In all hamlets this is slight. In some sections cities, as in tenement districts, more harm an good may be done by closing.

"8. All notices of proposed closure of hools should be sent to school managers in iting, the reasons given, and time of clos- e specified and made as short as possible, d a second notice given before the time for e expiration of the first, if closure is to be ntinued beyond the time specified in the st notice."—*The Sanitarian* (*Medical News*, arch 18, 1893).

INTESTINAL ANTISEPTICS.—Seventy years o Dr. George B. Wood introduced turpene in the treatment of typhoid fever; for ny years sulphuric acid has been regarded a useful remedy in cholera; and in the edical and Surgical Reporter of Feb. 1, 73, Dr. J. B. Mattison, of Chester, strongly commended the use of salicin in diarrhœa. hile empiricism dictated the use of these ugs in the respective diseases, modern cteriological researches have rendered the use of their action apparent.

Recent contributions to the study of gasb-intestinal disorders have almost revolutonized the treatment of this class of affecons. The experiments of Melchenko show nclusively that turpentine and allied subances, even in dilute form, prove destructve to typhoid bacilli, and this action, toether with the stimulant properties of the ug, serves to explain its wide field of usefulss in the treatment of typhoid fever.

Thymol is a more powerful antiseptic than rpentine, and has been recommended by veral observers as a substitute. In the cond volume of The Lancet for 1891, Dr. earson states that he has treated several hundred cases of typhoid fever in South Africa without a single death, and that the only remedy used was liquor sodæ chlorinatæ, given in doses of 15 minims in an ounce of water every three hours.

The most successful results in cholera appear to follow the conjoint use of subcutaneous injections of weak saline solutions, and copious enemata of 1-per-cent. solutions of tannic acid. Cantani has shown that 1-per-cent. solutions of tannic acid exert a decidedly destructive influence upon the bacilli, and more recent studies render it highly probable that the acid also helps to neutralize the toxines formed by the germs. Hueppe, Löwenthal, Gonsalez, and Nicholson, all testify to the value of salol as an antiseptic in cholera. They administer 15 grains of the drug every three or four hours in the early stage of the disease.

In dysentery, rectal injections of antiseptic solutions have proven very efficacious. Dujardin-Beaumetz prefers benzo-naphthol in the proportion of one part to a thousand of water as an enema in this disease.

Dr. Vondergoltz, of New York, who has been studying the action of lysol since 1890, recommends a 1-per-cent. solution of that drug in dysentery; and in the summer diarrhœa of children he uses a mixture of five parts of lysol to ten parts of sherry, of which he orders 10 drops to be taken with the milk every few hours.

Injections of 1-per-cent. solutions of creolin have also been quite extensively employed in dysentery.

In the intestinal catarrhs of childhood the antiseptics are almost indispensable, and probably salol, salicylate of sodium, and benzo-naphthol are the best. They may be conveniently combined with bismuth subnitrate or prepared chalk. The superiority of these remedies over opium in this class of diseases has been thoroughly established.

In obstructive jaundice, intestinal symptoms are often prominent, and result from the absence of bile, which is the natural antiseptic prepared by the liver to prevent putridity of the fecal matter. In such cases naphthol, thymol, or salol may be employed with advantage.—*University Medical Magazine*, March, 1893.

USES OF SODIUM BENZOATE.—Dr. Liégeois, writing on the therapeutic value of sodium benzoate, considers this agent as of the greatest importance in diphtheria, laryngitis, Bright's disease, and the uric acid diathesis. It must, however, be administered in large doses. The pain, dysphagia, and inflamma-

tion of the pharynx in common sore-throat are favorably modified, and cured in two or three days, by the administration of one drachm in children and 3 drachms in adults of benzoate of sodium daily. In diphtheria it is certainly of service either internally or as insufflation, but is not equal to applications of salicylic acid. M. Liégeois considers it a good expectorant when given at the onset in laryngitis and ordinary acute bronchitis. He prescribes it as follows:

Benzoate of sodium, ℥ j.
Tinct. of aconite, ♏xx.
Cherry laurel water, ℥ j.
Syrup of tolu, } āā ℥ ij.
Syrup of codeine, }
Water, ℥ ij.

To be taken in the twenty-four hours.

Associated with tannin, benzoate of sodium gives good results in Bright's disease if persevered in:

Benzoate of sodium, } āā ʒ iss.
Tannin, }
Extract of gentian, q. s.

Divide into 100 pills. Six daily.

Given in small doses in uric acid gravel it transforms the insoluble urates into soluble hippurates, and thus eliminates it from the urine. As a cholagogue, benzoate of sodium occupies the first rank; he associates it with salicylate of sodium and rhubarb:

Benzoate of sodium, }
Salicylate of sodium, } āā ʒ j.
Rhubarb, }
Nux vomica, 10 grains.

Divide into 20 powders. Two daily.

—*Medical Press and Circular*, p. 194, August 24, 1892.

A New Agent in the Treatment of Epilepsy.—On Dec. 26th Dr. Paul Gibier, of the Pasteur Institute, read a paper before the Medical Society of the County of New York on "A New Agent in the Treatment of Epilepsy," in which he sets forth the injections of "nervine," the extract prepared from the testes of the sheep. In introducing the subject, he said that an impression had got abroad that patients treated for the bite of a mad dog had been cured of epilepsy by the antirabic injection. He did not think the authorities of the Pasteur Institute in Paris were responsible for this idea; and his own experience led him to believe that the Pasteur treatment would produce but temporary relief, if any at all, in cases of epilepsy. As to the Brown-Séquard treatment, he was of the opinion that it was of more value than was at first thought. The use of "nervine" he tried first with good results upon a your Frenchman belonging to an epileptic famil After mentioning several other cases, two them in consultation with Dr. C. L. Dana, which this treatment was followed by marke improvement, Dr. Gibier went on to say:

"I am inclined to recognize a reliable pri ciple in the theory of Brown-Séquard, and consider that the action of suggestion e plains little of the effect of injections epilepsy. I have substituted other substanc without the knowledge of the patients, but was obliged to return to the former fluid consequence of the reappearance of the pa oxysmal phenomena. While I do not thi epilepsy can be cured in all cases by t nervous transfusion, I am inclined to belie the latter may improve the condition of t afflicted even when used without any oth treatment. It may help us in relieving t patients from the inconveniences of bromid It will certainly add to the benefit desirab from the other therapeutic agents. In future paper I will give the demonstratio of the powerful action of injections mac with the extract of fresh organs, and e pecially of the fluid extracted from the gra substance in nervous diseases other tha epilepsy. I am of the opinion that we a approaching a new field in therapeutics ge erally, which promises to be fecund in i results."—*Boston Medical and Surgical Jou nal*, Jan. 26, 1893.

An Improved Urethrotome.—This essentially the admirable dilating urethr tome designed by Dr. F. N. Otis, having t rack-and-pinion attachment suggested by D J. A. Wyeth, and the following additions my own:

1. A bulb at the distal end of the upp bar of the shaft, which sheathes the knif and which locates the tissue to be cut, avoi ing the annoyance and uncertainty of havin to take measurements.

2. The under or dilating bar has been e tended so as to be even with the extremity the bulb, when the instrument is working about its medium capacity. [This lower b ended at its junction with the last bracke when the instrument was first made; but found, in cutting very narrow annular stri tures, that an incline occurred just where gave the bulb a tendency to slip forward; s I had the instrument remodeled in this pa ticular.]

3. The upper or main bar of the shaft marked in millimeters, the bulb being zer A small wire is caught in the eye in th centre of the thumb-grip, passed under th pinion-handle, close to the shaft, and ben

ver the scale at the 16-centimeter mark. his little indicator shows accurately the ıovements of the blade.

Having predetermined the existence of ricture, the surgeon can, with this urethro- ›me: (*a*) locate the point of operation, (*b*) ecide upon the width or extent of the mor- id tissue, (*c*) cut with the utmost precision, ıd (*d*) make sure that the division has been ›mplete.

The urethrotome, as now made, is adapted › strictures having calibres ranging from 24 › 45 French scale; though these limits can e changed in the making up of a new ıstrument.—G. Corrie, M.D., in *Virginia Medical Monthly*, January, 1893.

THE MEDICAL TREATMENT OF ACUTE 'ONSILLITIS AND PHARYNGITIS: A COMPAR- TIVE STUDY BASED ON ONE HUNDRED AND IXTY-NINE CASES.—In conclusion of a long nd interesting article in the Journal of the ımerican Medical Association, p. 685, 1892,)r. J. E. Newcomb, of New York, writes: My views, therefore, in regard to the treat- ıent of acute simple sore-throat of the arieties alluded to, may be summarized as ollows: (1) I believe that in salol we have a emedy which, in the vast majority of cases, ›ill give relief quicker than any other.)ccasionally it utterly fails. Where it does o, I have found that iron tincture with ›otassic chlorate seems to be the best substi- ute. It is my conviction that this latter ombination finds its best field in those ›atients who have already had many previ- ›us attacks, and in whom there is more or ess of an interstitial deposit of connective issue in the mucous membrane. Salol is to nost patients far more agreeable than so- lium salicylate, and vastly more so than the ıauseating guaiac. (2) If peri-amygdalar nfiltration has already set in, it is an open ıuestion in every case as to whether we shall ›e able to prevent suppuration. An incision s, I believe, indicated wherever there is engorgement, even though no pus has yet ormed. The latter rarely comes before the ourth day. If it is not found, no especial liscomfort, then or thereafter, results to the patient from the incision, particularly if a ittle cocaine is used. The incision should ›e made where the pus is most likely to form, viz., high up, in front and above the pillars, far more commonly the anterior. (3) If pus is present, free incision toward the median line is indicated. It should be followed by a hot bicarbonate-of-soda gargle, together with poultices on the outside. (4) Care should be taken to thoroughly open the bowels with a mercurial and a saline at the commencement of treatment in any case."—*Medical Record*, March 11, 1893.

ANTISPASMINE.—This is a chemical combination of one molecule or sodium narceine and three of salicylate of soda (Medical Weekly). It is a white powder readily soluble in water, and contains about 50 per cent. of pure narceine. The chief advantages of antispasmine are its great solubility and the purity of the narceine it contains. It is, in this respect, far superior to the other preparations of narceine which have not as yet been used in medicine precisely because of their insolubility and variable composition.

According to the investigations of Prof. Demme (Berne), antispasmine constitutes an excellent hypnotic and analgesic, especially in painful spasmodic affections (hence the name). It is said not to be associated with the same risk in children as other opium preparations, and therefore deserves a high place in the treatment of infantile diseases. It is also said to be very serviceable in whooping-cough and to ease cough generally, in children as well as in adults.

The death of Prof. Demme unfortunately interrupted these researches. The following were his favorite formulæ for the administration of antispasmine:

For whooping-cough and laryngismus stridulus in children:

℞ Antispasmine, gr. xxiv.
Cherry-laurel water, ℥ ss.

M. Sig.: Fifteen drops once or twice a day in sugar and water.

For cough in adults:

℞ Antispasmine, gr. viij.
Cognac,
Syrup of mulberries, } ää ℥ j.
Distilled water,

M. Sig.: A tablespoonful three times a day.

—*Medical Review*, March 18, 1893.

PHENACETIN IN THE TREATMENT OF PNEUMONIA.—Practitioners who are the most conservative in their views concerning the medication to be employed in acute inflammatory fevers, and who especially unite in deprecating the use of heart-depressants, show a preference for phenacetin as an antipyretic. At the meeting of the American Medical Association in June last, Dr. Bailey said that phenacetin "could be safely used as an antipyretic in pneumonia," and pronounced it to be "as efficient as the external application of cold water, and no more depressing to the

heart." In the same discussion Dr. Beatty said: "Phenacetin is not objectionable as an antipyretic, because it does not affect the heart unfavorably." Dr. Beatty, by the way, believes that, in pneumonia, venesection is never indicated. He says that sedatives are only exceptionally required in pneumonia, and gives the preference to phenacetin when such medication is indicated. He employs the same remedy in the treatment of the pneumonias of the aged, advising its use, in moderate doses, when the temperature rises above 102°. As cardiac tonics, he entertains a preference for quinine, strychnine, or sparteine, to be administered as needed. Other writers cite the excellent effects of phenacetin in quieting the pain and restlessness of pneumonia, and in inducing that condition of gentle diaphoresis which promotes refrigeration, and is thought by some observers to hasten resolution. Cases of pneumonia are reported in which, when gastric or rheumatic symptoms were present, the remedy was advantageously united to Salophen, the new antirheumatic.

PHENOSALYL.—At the London Pasteur Institute, Dr. Christmas has for some time been engaged in the study of compound antiseptics, composed of mixtures of several substances known to possess bactericidal properties. Recently he has brought these experiments to bear more especially upon the mixture which he calls phenosalyl. This consists of the following ingredients:

Carbolic acid, 90 parts.
Salicylic acid, 10 parts.
Lactic acid, 20 parts.
Menthol, 1 part.

This ingenious mixture is made thus: The three acids are heated up to the point of liquefaction, when the menthol is added and incorporated with the rest. The product when cool is found to be very soluble in glycerin, and readily soluble in water to the extent of 4 per cent. Dr. Christmas has recently made a comparative study of the action of this phenosalyl on the staphylococcus aureus, which is found to be the bacterium that is most resistant to the influence of chemical bactericides, and has found it to be possessed of enormous antiseptic powers. Its efficacy is estimated by the Doctor to be at least twice as great as that of carbolic acid or salicylic acid taken separately, and is exceeded only by that of corrosive sublimate. It is found that the various substances of which this compound antiseptic is formed do not appear to exert any chemical action one upon the other. It is probable that further experiments in this direction will shortly be heard of.—*American Lancet*, February, 1893.

PILOCARPINE IN NERVOUS HICCOUGH.—Attention has already been drawn by several authorities to the beneficial effects of jaborandi and of its alkaloid, pilocarpine, in the incoercible attacks of hiccough frequently observed in the hysterical and in other neuropaths. But as the knowledge of this inhibitory action of the preparations of jaborandi on nervous hiccough does not as yet appear to have spread among practitioners in general, it might prove of advantage to relate the observations recently made on this subject by Dr. C. Le Nobel, Army Surgeon to the colonial Netherlands, and by Prof. B. Stiller, of Buda-Pesth. The former very promptly arrested a hiccough that had supervened under the influence of influenza and had resisted all the means previously employed, by the administration of an infusion of jaborandi leaves in diaphoretic and sialagogue doses. The latter has since a number of years been using pilocarpine with uniform success in every case of nervous hiccough that comes to him for treatment; he prescribes it in the following formula (Sem. Méd.):

Pilocarpine hydrochlorate, gr. iss [0.1 gm.].
Distilled water, fl 3 iiss [10 gm.].
Ten drops three or four times a day.

As can be seen, Prof. Stiller gives the alkaloid in small doses, and the effect of the medicament thus administered is not produced instantaneously, as in the case of Dr. Le Nobel, but gradually; the attacks of hiccough diminish in frequency, duration, and intensity, and eventually disappear entirely in the course of one to three weeks.—*Merck's Bulletin*, February, 1893.

THE EDISON CURRENT FOR CAUTERY PURPOSES.—In the New York Medical Journal for Feb. 4th, Dr. Edward J. Bermingham, Surgeon to the New York Throat and Nose Infirmary, describes a very ingenious apparatus which he has devised for controlling the Edison current so that it can be used direct for galvano-cautery operations. The apparatus consists of a *rheostat*, made of coils of iron wire and a handle. The peculiarity of the handle consists in its having solid conductors, and the circuit is therefore always closed. It is under the control of the operator's thumb at all times during the operation, and the current can be cut off from, or allowed to pass to, the knife instantaneously and without producing an arc. The apparatus is simple and inexpensive, and, from the detailed description given, any electrician can construct it. Dr. Bermingham has been using it for two years and a half for all his cautery operations.

The Medical Age.

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Original Articles.

CASE OF INTUSSUSCEPTION CURED BY CARBONIC ACID GAS INFLATION.

BY E. T. CAMPBELL, M.D.

Since instances of successful treatment of ases of intussusception of the bowel are by o means common, I desire to submit the ollowing report:

On the morning of Feb. 19, 1893, Mrs. ——, æt. 53, felt, on arising, a cramping in er bowels and a very urgent desire to defeate—so much so that she concluded she ould not have time to go out to privy, and o used a chamber. She had a very large tool, nearly filling the vessel. This gave er relief, and she completed her toilet and ent downstairs, when she again had urgent esire to go to stool. Going to the privy, ie had another large movement; but this me she was not relieved, the pain conuing so severe that she had great difficulty i making her way back to the house, on eaching which she immediately lay down on ie lounge, and soon began vomiting bilious iatter.

About noon I was called, and, diagnosing ie case as cholera morbus, gave a hypoermatic of morphia, a laxative, and ordered ijection of warm water. I then left, inructing the family to let me know if she id not get along.

She had a very comfortable night, and did ot vomit until next day (Feb. 20th) in the vening, when she began to feel some pain gain, and also began vomiting. I again aw her, and diagnosed an obstruction of ome kind.

The vomiting continued from this on at ntervals of from four to eight hours; pain ot enough to call for opiate; no fever, and o action of bowels.

Gave her large dose of magnes. sulph., and rdered large injections of warm water (4 to 6 quarts) every four hours. The enemata came away considerably colored and having an old smell, as of fæcal matter long retained. In place of pain, patient now complained of a sore spot, at which point she said it felt as though two opposing forces met. This I located in region of jejunum. (Patient is very corpulent, and physical examination was of no avail except to locate sensitive spot.) Still no fever and no increase of pain.

The symptoms remaining the same, the treatment was continued without change, except that the injections were given every two hours and in the genu-pectoral position, until the evening of the 21st, when vomit began to contain fæcal matter.

On the 22d I met Drs. Cole and DeWitt in council; when we concluded, since the injections were still bringing considerable quantities of fæcal matter away, to continue them.

On the morning of the 23d, not having obtained desired results, I concluded it must be a case of intussusception, and resolved to use Dr. Senn's method (gaseous inflation), and sent for Dr. Cole to assist me.

After using about four gallons of CO_2 (we used this in preference to hydrogen), patient gave a belch and vomited fæcal matter all over the bed. We continued, and she vomited a second time in the same manner, and then began belching gas, which she said tasted like soda-water. We had used about six gallons, and concluded our object was accomplished.

At time of first "belching vomit," patient said she felt something give way at the point of tenderness, but felt no pain from it.

She suffered very much from the excessive distension that night, but a large portion of the gas had passed off before the next morning, when she had a copious stool. From this on, she continued to improve, and made a rapid and complete recovery.

Tabor, Iowa.

THE MOSQUERA PREPARATIONS.

BY DR. ENNO WEISHART.*

Recent researches into the phenomena of metamorphosis have shown that every living organism, if it is to be maintained in a certain state of nutrition, requires a definite quantity of nutrients which serve to make good the losses constantly occurring in the body. No part of the total organism is proof against waste and consumption; every loss of one of the bodily constituents provokes hunger therefor, failure to satisfy which is indicated by depression of the vital functions. It is scarcely to be denied that in the preparation and ingestion of our food large quantities of certain nutrients are wasted, that is, are partaken of in much greater allowance than the body requires. If the results in this respect are in the main calculated to call up politico-economic problems, the question assumes quite a different aspect in cases where the nourishment of the sick is involved. In even a less degree than with the healthy subject, will the patient without appetite be in position to satisfy his need of nutriment, if the latter be presented to him in an irrational manner. If we reflect upon the diseases which have their seat in the digestive apparatus and are produced by defective function of the digesting organs, we will comprehend the value of the manifold endeavor now seeking to place at the command of the suffering and the enfeebled, nourishment in proper and predigested form, a part of the labor normally done by the digestive apparatus having been performed ere the food is consumed.

Progress in the recognition of those processes which in their totality are termed digestion has aroused in practitioners a longing for preparations which can be assimilated more readily than foods ordinarily prepared, and, on the other hand, has imparted to manufacturers the liveliest desire to satisfy this longing. If we now consider the importance of albuminoids in nutrition, and the difficulties which attend the assimilation of these very substances in the organism, we will understand why the number of preparations designed to modify by a process of digestion the most essential albuminoids of our food, and notably meat, has become so great. Flesh makes flesh; this is almost literally true, and yet the making of human flesh is not always achieved by the administration of meat, for, like all our nutrients beef requires a manifold and normal action of the digestive organs ere it is rendered soluble, transformed into peptone, or peptonized, when its constituents—so important in nutrition—first become of benefit to us, since they must be in this state ere they can pass into the circulation. This is performed by our digestive organs, when normally active in the most perfect manner, with the aid of the organic ferment pepsin contained in the gastric juice. Where, however, the gastric juice is lacking in this most important organic substance, as in the sick, the convalescent, children, etc., the nourishment of the organism is imperfectly achieved. In such cases we need nutrients rendered soluble and peptonized; among which peptonized meat is of great importance, since it is most efficient in counteracting debility and restores the enfeebled powers most rapidly. Nevertheless, of the meat peptones placed on the market, but a very small number meet the requirements of science—a far greater number consist of a simple and not even appetizing mixture of various albuminoids, whose price is in no relation to their nutritive value. Especially their unpleasant taste, repellant to most patients and children, compels the renunciation of their use—urgently as they may be indicated, and valuable as they might otherwise prove.

It is therefore cause for unqualified congratulation that a preparation has finally appeared on the market which, thanks to a new peculiar method of production, is not only readily taken by everyone, but also far surpasses in nutritive merit every other beef peptone. This is the Mosquera Beef Meat so warmly recommended by the well known Hamburg specialist in diseases of digestion Dr. Agéron. The manufacture of this peptone-bearing product consists in peptonizing choice lean beef with the freshly expressed juice of the pineapple. Under the influence of this pepsin-like vegetable digestive ferment, the meat undergoes an artificial digestion very similar to that effected by the

*Translated by Joseph Helfman from the Hansfrauenzeitung, No. 80, 1892, p. 218.

gastric juices of the human organism. The albuminoids are in a large measure transformed into peptone; the neutral fat is distributed in the form of a very fine emulsion; the salts remain unmodified, whilst the extractive matter is subjected to natural modification. The product, then dried without any admixture whatsoever, and finely powdered, forms the Mosquera Beef Meal—a fine brownish powder containing all the constituents of beef *minus* its water, and thus, as also by virtue of its pleasant taste, surpassing all meat peptones hitherto known. It is indicated in all cases in which the functions of the digestive organs lie prostrate, especially in all acute febrile affections in which, obviously, the patient all the more urgently requires appropriate, readily digested meat nourishment, since his vital functions and the process of combustion within the organism are exalted, and the consumption of tissue and fat in the body is extraordinary. But also in the relief of chronic diseases attended with neurasthenia and dyspepsia, such as gastric and intestinal catarrh, renal inflammation, and pulmonary tuberculosis, Mosquera's Beef Meal forms a valuable auxiliary. Among the chronic diseases, anæmia, now so prevalent amongst young girls, is to be included. As the sufferers from this affliction have but little appetite, and often indeed show great repugnance to many valuable, especially animal, foods, the proper treatment of the anæmic condition urgently demands a fitting dietary, to which the new beef preparation seems particularly adapted, as it makes no special draught upon the energies of the enfeebled organism in order that the latter may receive the benefit of its valuable nutritive constituents.

Mosquera's Beef Meal possesses not less value, notably in combination with cacao, in the peritonitis of small children, where the irritability of the stomach is so great that everything is at once vomited by the little patient. In the persistence of this vomiting lies the chief danger to the life of the child, for it renders very difficult the appropriation of the food partaken of, and not seldom makes it altogether impossible, all the food introduced being straightway evacuated *per os*. Thus the existing plethora of the mucous membrane is dangerously augmented, and exhaustion of the child's organism progresses, to which he must sooner or later succumb. It is obvious that the sensitive mucous membranes of the stomach and intestine in this condition are incapable of any digestive activity; hence the food to be given must be, first and foremost, mild, readily assimilable, and, withal, very nutritious—requirements which the Mosquera preparations, better than any others, respond to. If a little rice-water be added to the Beef Meal, this nourishment will suffice for days and the strength of the child be maintained.

For very weak, emaciated children, the Beef Cacao is to be recommended, because its sweet taste appeals more to the child's palate than the pure Beef Meal. Naturally, these preparations combined present an excellent regimen for children, especially in the first years of their lives, or in the period of transition from a pure milk-dietary to mixed feeding, during which meat is not well borne by the little ones, as they do not masticate properly and the needful gastric juice is not sufficiently abundant. For this purpose it is well to give the children daily one or two teaspoonfuls of Beef Meal, boiled with oatmeal, rice, sago, bouillon, etc., in which form it is readily taken, well borne, and quickly digested. Thus the child is easily given the requisite amount of animal food, and the housewife is spared the daily task of chopping and scraping; moreover, the child is better nourished with the more readily digestible Beef Meal than with ordinary meat.

Hence this product should be provided by every family in which there are children of tender years, or feeble persons more advanced in life, and should, in general, be constantly included in the family supplies; for it reinforces worthless soups, notably those prepared from the innutritious beef-extracts, rendering them invigorating and appetizing, and when added to vegetables and sauces it increases their nutritive value and palatability. May it therefore receive from those to whom the bodily welfare of others is confided, and who spare no pains and no sacrifice to bring up their little ones sound and strong—from the mothers of our land—the favor which it deserves!

THE THERAPEUTIC VALUE OF INHALATIONS OF OZONE.*

BY DR. AUGUST CAILLE.

Ozone (O_3), thus named by Schönbein of Basel, may be regarded as modified oxygen, and is produced by the action of the electric spark upon atmospheric air, also by the oxidation of phosphorus in moist air, by the action of sulphuric acid upon hypermanganate of potash, etc.

Ozone has extraordinary power as an oxidizing, bleaching, and disinfecting agent.

Ozone destroys cork and rubber, and oxidizes iron, copper, silver, quicksilver, iodine, etc. The most distinct reaction for ozone is the blue coloration of iodide of potash and starch-paste.

The therapeutic utilization of ozone in nascent state has been sought in various ways, but has been defeated by the lack of a proper form of employment.

In the last session of the Congress for the Study of Tuberculosis, Drs. Labbé and Oudin demonstrated a practicable ozone-apparatus, and reported their experience with respect to the therapeutic value of ozone-inhalations in pulmonary tuberculosis.

The ozone is produced in this apparatus by the electric discharge which takes place between the concentric surfaces of a tube devoid of air, and a metal cylinder. The tube is connected with the poles of a Ruhmkorf coil, and a source of the electricity is found in dry cells or in an accumulator. The ozone which is furnished in tubes thus charged, never exceeds the quantity which is termed the therapeutic dose, and comprises about 0.12 milligramme to one liter of air.

After the above-cited authors had dwelt upon the physiological action of ozone, its innocuousness on prolonged inhalation, and its entrance into the circulation, they referred particularly to the germicide and antiseptic properties of the gas, and submitted proof that the tubercle bacillus in pure cultures could be destroyed by the action of ozone.

This insight into the action of ozone, gained in the laboratory, gave Messrs. Labbé and Oudin the occasion for testing the agent in pulmonary tuberculosis, they assuming that ozone could not only exert a germicide action, but might also be capable of so modifying the morbid soil as to check the further growth of the micro-organisms.

In a double respect, therefore, a favorable action was expected from ozone-inhalations:

1. Reanimation and elevation of metamorphosis through high oxidation.

2. Direct and indirect germicide action of the gas through inhalation and introduction into the circulation.

The therapeutic applicability of the ozone was tested by the authors cited in thirty-eight cases of pulmonary disease, the first observations dating back three years. The cases were as follows: Seven in the first stage; twenty-three in the second stage; eight in the third stage.

Of these, thirteen were cured. On an average, the patients in the first and second stage gained 3 kilos in weight and 500 c. c. in vital capacity, appetite and bodily strength showing rapid improvement. The patients in the first stage lost all the physical symptoms of a pathological process in the lung, and seven in the first and six in the second stage were regarded as cured. Six died, and the others improved.

At the wish of Labbé and Oudin, Dr. Desnos of the Charité at Paris treated seven cases of pulmonary tuberculosis and eight cases of anæmia, and at the conclusion of his observations he declared the ozone to be an effective remedy which was destined to render great service in the treatment of tuberculosis and anæmia.

Dr. Collart expressed himself with similar favor in November, 1891, on the occasion of his report on the treatment of five cases of pulmonary tuberculosis with ozone. In Germany Dr. C. Sturm, of Rüdesheim, studied the subject, but I have never received any report of his results. It is stated that very recently a number of hospitals have been equipped in France for the treatment of tuberculosis with ozone.

In November of 1891, four tubes of ozone were sent to me under promise to experiment therewith and to report results; thus I came to study the action of ozone in tuberculosis of the apex, in anæmia and chlorosis, and in pertussis. Under my direct treatment and observation were four cases of tuberculosis

*Translated for MEDICAL AGE from New Yorker Med. Monatsschrift, March 15, 1893.

of the apex, three of severe anæmia, and five of pertussis. Besides, at my prompting, two additional cases of pertussis were treated by Dr. Mangold with ozone, and this report further comprehends eight cases of anæmia and chlorosis which for months remained under the care of Dr. Oreline, of this city. The report accordingly comprises twenty-two selected cases which were subjected to a protracted and systematic ozone-treatment, during the course of which the following points were considered:

1. Appetite.
2. Bodily weight.
3. Muscular power.
4. Vital capacity of the lung (noted in cubic inches).
5. Proportion of oxyhæmoglobin in the blood.

Determination of the latter was made with the aid of the hæmatospectroscope of Henoque. In most of the cases the ozone apparatus was placed and employed in the homes of the patients, under the assumption that ambulatory treatment would prove more or less worthless and devoid of results. During the period of trial no medicines of any kind were given.

[We refrain from reproducing the very interesting *résumé* of the individual cases, inserted by the author at this point, as transcending our space, and must content ourselves with the following recapitulation of the author's general results:]

For the present we will close our observations with the following *résumé:*

1. Ozone-inhalations by means of the Labbé and Oudin apparatus are harmless to children and adults.

2. Daily inhalations augment the proportion of oxyhæmoglobin 1 to 4 per cent. in a short time, and this proportion long remains stationary.

3. Of four typical cases of tubercular catarrh of the apex, no one was absolutely cured; in all the cases, however, nutrition was improved.

4. In pertussis the ozone-inhalations have reduced the duration of the disease and have appreciably mitigated the severity of the paroxysms.

5. In severe cases of anæmia and chlorosis, ozone-inhalations have had a salutary effect by stimulating metamorphosis, and have produced a cure, especially in cases in which the customary therapy remained without effect.

6. The apparatus may be used with advantage for the atmospheric disinfection of small rooms.

FRACTURE OF THE FOREARM, AND ITS BARBAROUS DRESSING.

BY A. D. BINKERD, M.D.

We have as good medical schools in this country as can be found in any other country; the teaching is as able and comprehensive; the clinical advantages of our seaboard cities are not surpassed in either London, Vienna, or Paris. Just as bold, brilliant, and successful surgical operations are done in America by American surgeons as were ever done in Europe by Lawson Tait or Spencer Wells. Indeed, the world is indebted to an American surgeon for the initiative in ovariotomy. Dr. Ephraim McDowell, in December, 1809, in the backwoods of Kentucky, removed from a married woman who was the mother of several children, an ovarian tumor, partly solid and partly fluid, weighing 22½ pounds. The patient recovered without any untoward symptoms, and survived the operation thirty-two years, says the elder Gross.

In the face of this formidable array of facts and brilliant achievements, why have we not yet learned to dress properly so simple a casualty as a fractured forearm?

Not once in ten times do we see the proper splint applied in fracture of the radius or of the ulna, or of both, simple or compound.

In ordinary life, fracture of the radius or of the ulna, or of both, is by far more common than that of any other part of the bony frame. It may occur in the lower, the middle, or the upper third, but by far the most frequently in the lower third—Chelius to the contrary notwithstanding. In my practice of twenty-seven years, fracture of the lower third has occurred ten times as often as in both the middle and upper thirds together.

Looking over my case-book, I find I have obtained uniformly good results in both the simple and the compound form of the casualty, whether fracture existed in the

radius only, or in the ulna, or in both. I have invariably used Bond's splint or some modification of it.

The great secret of success in the treatment of fracture of the forearm lies in putting all the parts into a natural and easy position. This can be done only by allowing the hand to close at will, as in the use of Bond's splint. To confine the hand to the tips of the fingers to a straight and stiff splint, is a barbarous and cruel treatment. The straight position is unnatural, and if thus confined will soon produce intense pain, even though there be no contusion of the soft parts nor fracture of the bones. No child will sleep the entire night with a well and sound arm confined to a straight splint to the tips of the fingers.

Much precaution must be observed that the roller be not applied too firmly, either before or after applying the splint. Due allowance must be made for possible swelling; this will be somewhat modified by the interval between the occurrence of the casualty and the application of the dressing. Great tension and intense throbbing pain is an indication that the bandage must be loosened. Strangulation, gangrene, and necessity for amputation, may follow the neglect of this precaution. It will brook no delay, but must be promptly attended to.

The placing of all the muscles into a natural and easy position, with the bandaging not too heavy and just sufficiently tight to keep the fragments in apposition with the least sense of compression as experienced by the patient, followed by an hourly application of a proper solution of lead and opium, affords the most promising and best condition that common sense can suggest.

If any muscle be put on undue tension, be it ever so slight, it will soon become uneasy, followed by pain increasing in severity until it becomes unendurable; the heart's action is increased in force and frequency; feverishness and jactitation follow; subsultus tendinum is developed, in which all the muscles of the wounded part now participate more or less; the fragments are drawn out of position by the spasmodic action of the muscles, thus constantly ministering to the sources of the trouble. A good and satisfactory result may not be looked for, or, if so, looked for in vain, under this unhappy and unscientific state of affairs.

The prudent and painstaking surgeon will see to it that this untoward state of affairs does not arise. The parts will be most gently disposed of; bandaged lightly and loosely. No muscle put upon the stretch to the extent of one gramme. The hand should be permitted to open and close at will, as when Bond's splint is used. And all the muscles will be quiescent, affording the best possible chance for perfect union in the shortest period of time.

I will cite only two cases: one compound fracture of both radius and ulna in the lower third; the other simple fracture of both radius and ulna, lower third.

Case 1.—J. S——., aged 12 years, fell from a butternut tree, some fifteen to eighteen feet, and lit upon some rocks with the palm of the hand. I was called in the night; went three miles, and found the boy in good condition though much scared, fearing the arm must be amputated. The sharp edge of the fractured bone cut through the soft parts which intervened between the cutting edge and the rock upon which he fell with much force. At the seat of the fracture the arm was flexed to the angle of 40 or 45 degrees, with both bones protruding at least an inch. There was a sudden cheering up of heavy hearts and sad faces when I assured the mother that amputation was unnecessary and uncalled-for. I prepared a Bond's splint, and a short, very thin and light anterior, and a dorsal splint of the half-round pattern. When all was in readiness—splints, roller bandages, and every necessary surgical appliance—an assistant seated behind the boy held the arm firmly while I seized the hand and made gentle and persistent traction till the parts fell into natural position. Another assistant now took charge of the hand while I proceeded to apply the anterior and dorsal splints, pressing them gently in, to hold the fragments severally of the radius and of the ulna slightly apart. A loose or gently firm roller retained the splints *in situ*. The hand was then put around the half-round of Bond's splint, the arm loosely bandaged in the splint, and the whole suspended from the neck, forming a right angle at the elbow. The lead-and-opium wash was applied daily

as per direction. The result was carefully watched, and the dressing changed when necessary. The external wound healed by first intention. In four weeks all dressing was removed. Bony union was complete; rotation was not in the least impaired. In short, the result was perfect and satisfactory. No twitching of the muscles occurred, and there was therefore no disturbance of the coaptation of the parts.

Case 2.—Boy fell 15 feet from an apple tree to the croquet ground beneath, striking upon the palm of the hand. Result, simple fracture of both radius and ulna, lower third. Displacement angle, 45 degrees. I was away from home at the time, and a young doctor was called, who, with the assistance of the mother, reduced the fracture and applied the machine of torture, the straight splint, and confined the fingers to the tips. The boy did not complain much for the first few hours, but did not sleep any the first night. The next night he was still worse from pain, feverishness, and much jactitation. I arrived home the third day in response to a telegram, and comprehended the situation at a glance. I applied a Bond splint; the pain subsided, and all untoward symptoms vanished as if by magic. In three weeks all splints and bandages were laid aside. Union was complete. In four weeks from the day the fracture occurred, the boy rowed the skiff or boat over the river, using both hands with equal facility. No trace of the fracture can now be detected.

West Monterey, Pa.

HYPODERMATIC MEDICATION IN SYPHILIS.

BY L. WOLFF, M D.*

Amongst the therapeutic methods which are largely employed on the continent of Europe but have found very few adherents in this country, is, no doubt, the hypodermatic treatment of syphilis. Although proposed and practiced in the early part of 1860, it was some time before it was extensively employed, even abroad. This was, no doubt, largely due to the fact that it was little understood; that, from timidity, the doses employed were by far too small, and the results therefore not brilliant: as well as from fear of the formation of abscesses, and the necessary amount of pain accompanying such medication. The pain accompanying it is still an argument against its employment that is not to be overcome. If we, however, consider that in the principal medical centres of continental Europe little or almost no mercury is given internally any more, it will be seen that even the pain accompanying and following the injections must be outweighed by the results. While the first experiments on hypodermatic medication in syphilis were made with solutions of corrosive sublimate, the insoluble mercurials were soon substituted by Scarenzio and others. It was found that if insoluble mercurials were introduced beneath the skin they were rapidly absorbed, that they were soon found in the urine, and, also, often produced the untoward effects of mercury, besides its characteristic inhibiting and curative influence over the lesions of syphilis.

In a former paper on this subject (Therapeutic Gazette, Nov. 15, 1889) I dwelt on the history of this method of medication, and gave a synopsis of the literature on the subject. I shall therefore, in this paper, consider principally my experience with this treatment and with the various agents so employed. During my student days I had the opportunity of watching and practicing this method, and I have continued to employ it to this day in a large and varied practice which has brought to me perhaps an unusual number of cases of early and secondary syphilis. Though I have again and again abandoned it, owing to the pain it occasioned, I have always had to revert to it in order to satisfy my patients, who, if they had been treated hypodermatically once, and were then treated with mercurials taken by the mouth, would gladly stand the pain of the injections rather than the slow results and the digestive derangement caused by the older methods of medication.

I usually begin the injections of corrosive sublimate in the intra-scapular region, on one side and about two inches from the posterior vertebral processes, and continue down the back in the costal interspaces—the injections

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being about one or one and a half inches apart. The effect of the injections on still open primary sores, on indurated glands, on macular syphilides, and on pharyngeal ulcerations, may be said to be almost magical. It is noticeable that within a few days, and usually within a week or ten days, all these signs have disappeared. The same beneficent results may also be said to take place in specific iritis and choroiditis, and it is especially in these two affections that I consider the hypodermatic administration of corrosive sublimate, in the doses and manner mentioned, of the greatest value. Papular eruptions do not show the same tendency to disappear rapidly under the hypodermatic treatment, but have usually faded within a few weeks. The effect on luetic fever and nocturnal pains is so marked that with the first or second injection the patient notices a marked improvement. I never use less than a ¼-grain injection at one time, and generally employ a 1-per-cent. solution in distilled water, filling a syringe of 25 minims' capacity. These injections are continued daily, and during the first week or two the patients stand the treatment fairly well. There is rarely, during this period, any evidence of soreness of the mouth or gums, nor is there any intestinal trouble noticeable. After the entire back, on both sides, has been gone over with injections, many of which have left quite sensitive indurations, their repetition in or near the old places proves quite painful, and it is only then that real complaints from patients are heard. Usually after eighteen or twenty injections tumefaction of the gums becomes marked, and gingivitis is often noticed. The daily injections are then intermitted, and are made at intervals of two, three, or four days, the untoward symptoms rapidly disappearing during such intervals. The total number of injections usually made in any one treatment is about twenty-five, but I have continued them to the number of thirty or thirty-five when marked pigmentation of the local lesions supervened. A good rule may be to carry on hyper-medication for about two weeks after the total disappearance of all symptoms. It is, of course, understood that during this time the patient is to be supported by a liberal diet, by milk punches, and, when the digestion is impaired, by tonics and quinine. The mouth should be kept scrupulously clean, the teeth being cleansed after each meal and at bedtime with a soft brush dipped in a solution of 1 drachm of potassium chlorate to 6 ounces of water, and containing also a drop of carbolic acid to each fluidounce. While warm full baths or steam and hot-air baths are adjuvants to the treatment, the cold bath should be interdicted, as well as exposure to cold and deprivations. I may safely say that I have made thousands of these injections and have yet to record a case where they have been followed by abscess or sloughing. All of my cases so treated were ambulant, and I do not remember that any of them lost a day from their usual vocations during the treatment.

The immediate effects of the injections of corrosive sublimate have been so uniformly good that I need to consider now only the remote effects on the progress of the disease and its liability to relapses. The permanency of a remedy in syphilis is one of the features of the greatest importance; and here I must say that, rapid as is the beneficial effect of this method of medication, there is a correspondingly large number of relapses. Of the cases that I have so treated, and of which I have been able to keep a record, I can safely state that in about 60 per cent. no further symptoms developed. I have notes on a number of cases so treated who subsequently married and raised apparently healthy offspring. Of the remaining 40 per cent., however, I cannot say that they have done so well, and many of them, after receiving two, three, and even four courses of treatment by injections, had to submit to treatment by systematic inunction before the tendency to relapse was overcome.

It is this tendency to relapses which has caused me to abandon hypodermatic injections after a second failure as to permanency of cure. It made me investigate the many other mercurials suitable for hypodermatic medication. It has been experimentally proven by Vajda, of Vienna ("Ueber den Einfluss des Quecksilbers auf den syphilitischen process"), that the iodides inhibited the elimination of mercury by the kidneys, and that the slower the elimination the greater the safety from relapses. For this

reason it has been my practice to give 5 to 10 grains of potassium iodide three times daily, after the injection treatment, for months to come; but even this plan has not always prevented frequent relapses. Acting on this indication, and at the suggestion of my friend Dr. Thomas H. Fenton, I have tried injections of iodo-hydrargyrate of potassium, a compound of iodine and mercury, but I have found these injections no less painful, and their permanency has not been greater in my hands than with the corrosive-sublimate treatment. In respect to permanency, it is said that the injections of the insoluble mercurials are of greater benefit than the soluble ones. This might be inferred from the fact that their conversion into a soluble compound beneath the skin is a slower process, and, while thus a mild continued mercurialization is produced, the injections need not be repeated so often. The insoluble mercurials have, however, the disadvantage of not being always aseptic, nor of being readily rendered so. It is true that with the introduction of vaselin oil as a vehicle for their hypodermatic administration they can be rendered less septic as well as less painful.

At the head of the insoluble preparations, so far as efficiency is concerned, calomel must figure. I give below the formula for its use, as well as the formulæ for other of the insoluble mercurials, according to Professor Edward Lang in his "Ordinations Formeln:"

℞ Calomel, Vaselin oil, } ää 4.5 grammes.
Lanolin, 4 grammes.

Each c.c. contains 0.371 gramme of mercury; 0.1 c.c. to be injected not oftener than two or three times the first week.

The precipitated mercuric oxide (hydrarg. oxid. flav.) comes next:

℞ Yellow oxide of mercury, 4 grammes.
Vaselin oil, 4.5 grammes.
Lanolin, 3.5 grammes.

Each c.c. contains 0.391 gramme of mercury. To be used as the calomel injection.

The salicylate of mercury is lauded very highly, and is prepared for injection as follows:

℞ Salicylate of mercury, 7 grammes.
Vaselin oil, 4 grammes.
Lanolin, 2 grammes.

Each c.c. contains 0.391 gramme of mercury.

The latest preparation and, at the present time, the one generally employed in the hospitals of Paris, even by the veteran Fournier, is the mercurous oxide, which is really a mercurous-mercuric oxide, but better known as the black oxide of mercury. It is used as per following formula:

℞ Black oxide of mercury, 4.7 grammes.
Vaselin oil, 6.2 grammes.
Lanolin, 3.1 grammes.

Each c.c. containing 0.39 gramme of mercury, and to be used as the other preparations.

I might go on and quote in the same manner the thymol-acetate, the diphenylate, and the sozoiodolate of mercury, and other forms of the drug; but as those named are the preparations generally used, I will omit the others.

It will appear from the above that, after all, the virtues of the preparations quoted consist in the amount of mercury they contain and in the slowness of its conversion beneath the skin. The more rapidly converted, the sooner the lesions disappear; the more mercury introduced with safety to the general health, the greater the curative effect on syphilis; but—the slower and more persistent the conversion, the greater the permanency of the treatment and the likelihood of a total extinction of the syphilitic poison. It may be said against these insoluble mercurials, and with some force, that their advantage over the soluble preparations is only by their slower action, while the marked local reaction which they produce is quite as much as with the soluble mercurials. Such is really the case; and the desideratum, therefore, seems to be to employ a preparation that will produce the least local reaction and that will be slowly converted, while least in its probability to produce untoward effects. Professor Edward Lang, of Vienna, some years ago experimented on the direct introduction of metallic mercury in minute subdivision as being nearest to the ideal method of inunctions, which yet hold the highest place in permanency in the treatment of syphilis. He found that they were readily borne, that they produced little or no local reaction, and, on account of the slow conversion of the mercury, needed repetition only at long intervals. He claimed that the introduction of the metallic mercury hypodermatically exercised an influ-

ence over the syphilitic process which was in direct proportion to its conversion, which could be studied by its excretion through the kidneys. This appealed to me as one of the methods most likely to prove more permanent than any of the others, and I introduced it in my private practice as well as in the wards of the German Hospital under my control.

To fully describe this method I must mention the manner of its preparation for hypodermatic use, as given by Professor Lang in his "Ordinations Formeln." This consists in first making an ointment of mercury with lanolin, as follows:

Anhydric lanolin, 15 grammes; dissolve in c. p. chloroform, 50 grammes, and evaporate the chloroform by continued stirring until the weight is 30 grammes; then add pure metallic mercury, 30 grammes, and continue stirring until all the chloroform is evaporated and the mercury is perfectly extinguished. (This can be recognized if, by spreading with a spatula on paper, no mercury globules are visible by means of a magnifying glass.)

This is his strong lanolin mercurial ointment, and it forms the basis for his oleum cinereum or gray oil. Of the latter he has two preparations, according to the dilutions, the 50-per-cent. and the 30-per-cent. oil. The formula for the former is as follows:

℞ Strong lanolin mercurial ointment, 9 grms.
Olive, almond, or vaselin oil, 3 grammes.
Mix well.

Of this preparation 0.05 c.c. is the average dose for injections, but if it is desirable to inject double the quantity it is best done in two different places. To produce a very active effect it is advisable to inject twice a week 0.05 c.c. of this strong oil until all symptoms have disappeared. After that, and to prevent relapses, 0.05 c.c. should be injected about once a week or once in two weeks for some time afterward. All injections should be made, beneath the skin, in the back, about one inch from the median line, the semi-solid mixture being previously warmed by immersion in hot water until it becomes fluid. Lang makes use of injections of 0.05 c.c., two to four times during the first week; and subsequently every week, and later every two weeks, the same amount. He also recommends a milder gray oil, made as follows from the strong lanolin mercurial ointment:

℞ Strong lanolin mercurial ointment, 4.5 grms.
Oil of sweet almonds (or olive or vaselin oil), 5.5 grammes.
M.

Each c.c. of this contains 0.366 gramme of mercury. This is termed the 30-per-cent. gray oil. Of this oil 0.1 c.c. is the average injection made in two places of the back.

These formulæ, complicated as they may seem, can be easily worked out; and when once the lanolin mercurial ointment is made, the dilution requires very little time, as but small quantities are required—a half ounce will last for weeks—and, if necessary, should be made fresh every month or two, although these oils really keep a much longer period.

The syringe for injections should be accurately gauged and subdivided into 0.1 c.c. and tenth parts thereof. The syringes as made by Reiner, also Leiter of Vienna, are used for that purpose, the total capacity of each being one-half cubic centimeter. They have been accurately gauged, and a certificate of accuracy accompanies each. While it might be well to disinfect the needles and syringe before using, by syringing them with a 4-per-cent. carbolic water, I have found that there is but little danger in private practice even if this precaution is not observed. The gluteal regions are said not to be very suitable for these injections.

In the use of the gray oil it has been my practice to inject 0.1 c. c. every week for the first four to six weeks. Usually macular eruptions fade after the second or third injection, papular ones after the fourth or fifth. Examination of the urine showed the presence of mercury within the first week, and its presence was noted for a month and more after all injections had been stopped. The injection of smaller quantities (0.1 c. c. of the 30-per-cent. oil) in different parts of the back, is of greater advantage than the injection of double the amount in one place, the urine showing the mercury sooner in the first case than in the second. The only precaution to be observed in the employment of

the gray oil is, not to use too much. It is a frequent temptation when the curative process is slow, to increase the amount injected or to repeat it oftener. This is to be avoided, as the mercury is only slowly converted and accumulates to the point when it manifests its potency over the syphilitic process. An auxiliary precaution to be observed is to pay careful attention to the teeth and mouth. As the development of absorbable mercurial compounds is progressive, the injections should be discontinued or made less, even upon the slightest effect noticed on the gums. This medication is a most effective and potent one, and I can readily see how, by a lack of precaution, severe salivation might ensue. Let no one suppose that, as there is little reaction immediately upon the injection, it might be pushed without hesitation. The literature has several cases where an uncalled-for free use of this remedy has caused not only bad but also fatal results. In my experience such has not been the case, although I have employed it in a large number of cases—with uniformly happy results.

To sum up the indications for the hypodermatic medication of syphilis, I should say that in cases where the symptoms require urgency of treatment I would employ the injection of ¼ grain of corrosive sublimate, at first daily and subsequently every other day, until about twenty-five injections had been given. If, after this, all the symptoms have not entirely subsided (entire absence of all pigmentation), I should resort to injections of the 30-per-cent. gray oil, 0.1 c. c. in one or two places in the back once a week until six to eight injections have been made. If, after a shorter or longer period without medication, further manifestations of syphilis should appear, the same series of injections with gray oil should be made and thus continued until, after long lapses between treatment, no further return of the lesions appears. The injections of corrosive sublimate, as described, have the advantage of more rapid action, and will often suffice. I should always recommend their use at first as preferable to others, but when relapses occur the injections of gray oil are both less painful and promise greater immunity from subsequent relapses.

PHYSIOLOGY OF ANÆSTHESIA, WITH SOME CONTRA-INDICATIONS.

BY DR. SAMUEL BELL.*

Physiology of Anæsthesia.—Artificial anæsthesia presents many points of resemblance to natural sleep. The latter is heralded by a gradual failure of the special senses: the eyes close, general sensibility fails, and finally hearing is abolished; the voluntary muscles of the limbs are the first to yield, followed by the muscles of the trunk; respiration and circulation continue, although in a less degree; as sleep invades the brain, perception of external impressions is lost, but, while the function of the external senses may be lost, certain groups of brain-cells may remain active, and the development of ideas within the brain go on. The production of artificial anæsthesia is marked by a period of exaltation or excitement; this is due to the fact that the artificial sleep is produced by the action of an agent foreign in substance and paralyzing in nature. The primary effect of an anæsthetic is an increase in the circulation of the blood, and a local irritation of nerve supply; at first the vascular walls contract from the effect of the foreign agent in the blood, but the period of vascular contraction is immediately followed by the stage of relaxation under the paralyzing effect of the anæsthetic, with an increase of blood supply through the vessels and reaching the nerve supply and muscles of the heart. The latter organ contracts more powerfully, consequently propels more blood through the dilated blood-vessels. The brain, spinal cord, and every part of the body, receive a larger supply of blood, and as a physiological sequence a general temporary increase of function is the result. During this stage the functions of the general and special senses are intensified by the very agent employed to entirely abolish them. However, this period of temporary exaltation is soon passed. The blood carries the paralyzing agent to the higher and deeper ganglia; the action of the heart is retarded, with a corresponding decrease in the volume of circulation; respiration be-

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comes slower; the cortical cells become paralyzed, ideas disturbed and disconnected, and at last complete loss of consciousness and sensation. At this stage, if the equilibrium be established between the amount introduced and the quantity eliminated, the anæsthetic condition can be continued for a reasonably unlimited time. But if the introduction is urged beyond the power of the tissues to eliminate, they become saturated, the equilibrium is deranged, and death is the result.

Causes of Death from Chloroform Anæsthesia.—The causes of death from chloroform may be stated as follows:

1. From the vapor being too concentrated. In animals, vascular pressure has shown great variations during chloroform-inhalation. Patients have been anæsthetized, circulation and respiration appearing normal, when, a fresh supply of chloroform being placed upon the sponge, death was the immediate result. In such cases death is due to an overdose, not in amount, but too much given in too short a time.

2. Death has resulted from too early surgical interference before anæsthesia was complete. Reflex action is more dangerous during the first period of the inhalation of chloroform; impressions on the heart are more severe. Clinical observations have shown that surgical interference during the period of excitement will produce impressions that will be carried to the heart and cause death. As has been shown by physiological experiments, partial anæsthesia from chloroform is a stage of great danger.

3. From obstruction to respiration. Death may result from the tongue falling back, or from tetanic spasms of the muscles of the chest. If the air is overloaded with the anæsthetic, one deep inspiration may pass the limits of safety. Twenty-eight cases are on record.

4. Death from paralysis of nerve centres presiding over respiration. The heart will continue to beat after respiration ceases. I have observed this mode of death in dogs anæsthetized with ether. It is said to be peculiar to ether, although most reliable observers concur in the opinion that the mode of death from the inhalation of ether and chloroform is the same. The chief point is, that death does not occur so frequently from ether. Death never takes place from the latter being too fully charged with air, as occurs in chloroform. Clinical observation does not support the assumption that death from ether is always by the lungs, and from chloroform by the heart: experimenters have filled the larynx with air, and the patient died from cardiac paralysis. Deaths have occurred at the close of anæsthesia, more frequently when ether was the agent employed; and why, it is difficult to explain.

Diseases and Conditions in which Anæsthetics are Contra-indicated or Dangerous.—A fatty or flabby condition of the heart, accompanied with an emphysematous condition of the lungs, or dilatations of the ventricles with an aortic obstruction or regurgitant murmur, are conditions in which anæsthetics should be given only as a last resort, and then with great caution. Mitral or tricuspid murmurs are not so dangerous as those of the pulmonic and aortic orifices. A calcareous condition of the arterial system, and especially of the coronary arteries, with valvular insufficiency; also cases in which the inhibitory influence of the pneumogastric is too great, together with derangement of the cardiac ganglia; these conditions indicate danger in the administration of anæsthetics. There are no pathological changes in the respiratory tract in which either chloroform or ether is entirely contra-indicated. Asphyxia may occur from the irritation of the agent upon the mucous surfaces of the larynx, causing tetanic spasms of the respiratory muscles as a result of reflex nervous action; or asphyxia might occur from improper adjustment of the inhaling apparatus used, or from a wet napkin on the face causing suffocation. All pathological conditions of the respiratory tract, especially the vesicular structure of the lungs, influence the diffusibility of the vapor used, on account of the impairment of the healthy absorbing surface. All diseases which diminish the energy of the heart and lungs increase the dangers from anæsthesia. Exhausting hæmorrhages, intemperance, cold, hunger, mental anxiety, loss of sleep, fatigue are all causes of danger, because they decrease the vital forces. Various diseases of the brain and spinal cord, especially those which surround and encroach upon the me

dulla oblongata, increase the danger. All intrathoracic diseases, delirium from intoxication, excitement and terror from any cause, increase the risk. Death in the great majority of cases is due to the direct result of the toxic effect of the anæsthetic upon the nervous centres which preside over circulation and respiration; consequently there is no anæsthetic agent which can be used without some degree of danger.

Mortality by Chloroform and Ether.—This question can be only approximately determined. The number of administrations, with the relative number of deaths, cannot be accurately estimated. Many deaths have been reported, and we feel safe in saying that many have not; but enough have been reported to enable the writer to decide the relative danger of the different anæsthetics. It is certain that chloroform has caused a great many more deaths than any other anæsthetic agent, but it can also be justly stated that chloroform has been much more extensively used than any other agent. In Europe a majority of the surgeons have used chloroform alone. American surgeons have used ether more extensively. Squibb has estimated the ratio of deaths from chloroform as published in American journals at 1 to 11,674. Assuming that only half the fatal cases have been reported, this would give a ratio of 1 to 5,837. The Royal Infirmary of Edinburgh gives a more favorable showing; in ten years, with 26,500 administrations of chloroform, only one death occurred. A report of twenty of the London hospitals, where chloroform was used about 8,000 times per annum, gives a mortality of three per annum, or a ratio of 1 to 2,666. It is admitted by the best American authority that, out of 80,000 inhalations of chloroform during the war of the rebellion, only seven fatal cases resulted, giving a ratio of 1 to 11,428. The assertion is also made that during the Crimean war not a single death occurred out of 20,000 inhalations. Kappeler reports for himself, Billroth, Nussbaum, and König, out of 39,000 administrations of chloroform by them, only two fatal cases, or the ratio of 1 to 19,500. The exact information with reference to the mortality from ether is not more reliable than that concerning chloroform. From the most reliable sources the ratio of deaths is 1 to 23,204. For protracted operations requiring prolonged anæsthesia, ether is by far the safer; also for weak and debilitated patients.

Detroit, Mich.

A STUDY OF MILK AND ITS USES.*

BY J. M. G. CARTER, M.A., M.D., SC.D., PH.D.†

It would seem to be unnecessary to make a special study of the milk question, were it not for the amount of incorrect information current in regard to the subject. This ignorance, it is necessary to say, is not wholly confined to the laity. The State makes it a duty of the authorities to see that cattle which are to be "beefed" are in good condition. If horses or cattle become afflicted with pleuro-pneumonia, the State authorities and health commissioners are at once excited over the matter, and a thorough investigation is made, and proper measures adopted to remove the danger. But how many of us ever ask whether the dairy from which we secure our milk is composed of healthy or unhealthy cows? It is asked of what stock or breed they are, but the state of health, the quantity of food, and even sometimes the quality of food, are not investigated.

Cattle are subject to indigestion, diarrhœa, constipation, febrile diseases, skin diseases, tuberculous affections, etc. While temporary illness of a cow may not greatly affect the milk—not sufficiently, perhaps, to make any perceptible impression upon the individual who is using it—yet it does affect one to some extent; and if the illness becomes more severe or of a chronic nature, the milk will become so changed in its normal constituents that disease will be developed eventually in the person using it. The proportions of the elements of which milk is composed may be disturbed to so slight an extent that an adult would feel no inconvenience from drinking it, while an infant might be thrown into a state of severe indigestion or fatal cholera infantum from use of the same diet.

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An analysis of human milk gives the following composition: Water, 86.271; solids, 13.729; the solids consisting of proteids (albuminoids) 2.950, fat 5.370, lactose 5.186, salts 0.223.

An analysis of cow's milk gives the following results: Water, 84.28; solids, 15.72; the solids consisting of proteids (albuminoids) 4.32, fat 6.48, lactose 4.30, salts 0.63.

The casein or caseinogen of human milk not having been satisfactorily separated, I have not indicated the per cent. in cow's milk in the table, and in both tables it is included in the proteids.

It will be seen from these analyses that there is a difference existing between human and cow's milk, both in the quantity of water and the amount of solids, but a greater difference is observed in the relative and actual amounts of the various ingredients which combine to make up the solids. All the compounds named in the analyses given here are in greater amount in cow's milk than in human milk, except lactose or milk sugar; and it is to be noted that the excess of proteids, or nitrogenous compounds, in cow's milk, is almost 50 per cent. above the amount in human milk. It is because of these differences that the cow's milk must be modified by the addition of other ingredients, and proper dilution, before it becomes a suitable diet for infants.

Cow's milk, however, contains carbon, oxygen, nitrogen, and hydrogen, the elements so necessary to the human body, in various proportion, in the form of water, casein, albumin, fat or butter, and lactose or milk sugar. It also contains sulphur in the proteids, and traces of various salts. Indeed, adult life may be supported for a considerable time upon a milk diet.

After a time, however, varying according to the tastes and idiosyncrasy of the person, nausea and loathing of milk may occur; and it is to be remembered that while in some cases this aversion will not appear for weeks, in others it may be only a few days before the stomach refuses the diet. The cause of this disturbance lies in the nitrogenous matter (proteids or albuminoids) which occurs in too great quantity in proportion to the carbohydrates, and thus interferes with digestion. For instance, the body requires 18.3 grammes of nitrogen daily, and of carbon it requires 328.9 grammes. To obtain the proper amount of nitrogen, then, requires one to drink 2,905 grammes of milk, or more than 2½ liters, daily; and to secure the proper amount of carbon, requires one to drink 4,652 grammes, or about 4½ liters, daily. To secure the proper amount of carbon from milk, then, requires drinking too much water, under ordinary circumstances, as well as taking too much fat and albuminates. This is not so objectionable in children as in adults, for in children the elimination and growth are rapid, and water and fat are essential.

The benefit arising from the use of a liberal milk diet—1½ to 2½ liters a day—in typhoid fever and similar diseases, is due to the fact that nitrogenous metabolism is great in these pathological states, and the extra amount of albuminoids or proteids in milk supplies this new demand of the system. Where it is desired to give muscular tone and great strength, a milk diet should not be prescribed. It is omitted from the diet of athletes.

It should be remembered that the time required for digestion of milk in the human stomach is about three hours, and when prescribed in sickness it should be given as often as that; but if only small quantities can be taken at a time, it should be given more frequently.

In view of the fact of the assistance which this diet renders in creating new tissue and aiding elimination, may we not suspect, with Galen and Parkes, that milk would constitute a good remedy for failures in tissue-formation and elimination in the aged? It must not be forgotten, however, that some old people cannot digest milk.

Aside from the idiosyncrasies and peculiarities of certain individuals, the causes of disagreement of milk with patients may be summarized as follows:

1. Contamination by disease-germs from the cow.
2. Poisonous foods eaten by the cow.
3. Extraneous disease-germs.
4. Pollution by dealers.
5. Souring or decomposition.
5. Indigestion of curds in weak stomachs.

Not only is milk affected by such diseased

conditions as feverishness, pain, and the like, but it is often contaminated by germs present in the animal at the time the milk is secreted. These germs may be the cause of acute disease, as scarlet fever, diphtheria, typhoid fever, and possibly pneumonia, in mothers; foot-and-mouth disease, scarlet fever, and the cattle plague, in cows. Among germs causing chronic diseases which may be conveyed in the milk may be mentioned, as most important, the bacillus of pearl disease in animals, causing tuberculosis in man. It is well known that infants nursing tuberculous mothers are liable to be inoculated with the bacillus tuberculosis, or at least to be made more susceptible to its ravages. In the cattle plague, the milk contains blood.

Poisonous foods eaten by cows deteriorate the quality of the milk, and may render its use dangerous. The disease known as milk sickness has been supposed to be due to some poisonous plant being eaten by the cow. Others again, to be sure, have supposed it to be a germ disease. Poison ivy, rhus toxicodendron, and other western plants are supposed to poison the milk when eaten, and render it unfit for use. In fact, many kinds of food used to keep cows are deleterious. Brewer's swill, autumn leaves, garlic, cabbage, and turnips should all be eschewed as milch-cow food, because they deteriorate the milk.

Disease germs may enter milk from extraneous sources. This may occur in many ways. While in some large dairies every precaution is taken to furnish pure milk, few average dairymen, perhaps, wash their own hands before milking. This should be done; and not only this, but the udders ought also to be thoroughly washed, in order that no manure or dirt may get into the milk. It is well known that diseases are sometimes caused by pus from sore or ulcerated udders entering the milk. Thorough cleansing would obviate in great measure this liability to disease; but what is better still is the prohibition of the use of milk altogether from cows with ulcerated udders. Stomatitis and aphthous sore-mouth are diseases sometimes caused by carelessness in these particulars.

Milk is made blue by triphenyl-rosanilin, which is probably a bacterium, perhaps *Oidium lactis*, and is known to produce gastric irritation, diarrhœa, and feverishness. *M. prodigiosus* is a purple-red micrococcus which sometimes grows quickly in standing milk. Another bacterium, *B. synxanthus*, which occurs in milk, causes a yellow color. Milk which contains large quantities of oidium, even though the blue color may not appear, may produce dyspeptic, sometimes even cholera-like, attacks, and possibly aphthous affections of the mouth and alimentary canal. It is a matter of extended observation that milk may convey the poisons or germs of typhoid fever, scarlet fever, diphtheria, etc. Parkes tells us that Ernest Hart has collected and tabulated reports of fifty epidemics of typhoid fever, fifteen of scarlet fever, and seven of diphtheria, due to milk poisoning; and since that was written, many other epidemics have been reported, due to a milk cause.

The pollution of milk by dealers is so well known that it is scarcely necessary to spend time upon this phase of the subject. It should be remembered that good milk has a specific gravity of about 1.030 to 1.034, and much deviation from this standard calls for investigation. Skimmed milk has a higher specific gravity, 1.034 to 1.037. Water added to this lowers the specific gravity.

The souring of milk is due to decomposition. Decomposition of nitrogenous matter causes milk sugar to be converted into lactic acid, which renders the milk sour. This is caused by the presence of certain bacteria or fungi, the "ferment lactique" of Pasteur, and "bacterium lactis" of Lister, and other species which cause the milk to absorb oxygen from the air. In other words, the activity of the bacteria results in an absorption of oxygen into the milk, and a giving off of carbonic dioxide (CO_2). These bacteria sometimes, and very often too, produce from milk a toxalbumin or ptomaine called neurine, which may cause various forms of intestinal disease, as diarrhœa and other forms of irritation, especially in children. The souring of milk in the stomach is sometimes the result of an excess of gastric acidity, which converts the milk sugar rapidly into lactic acid, by breaking up a molecule of milk sugar ($C_{12}H_{24}O_{12}$) and, by a rearrangement of its atoms, producing four molecules of lactic acid ($H_2C_3H_4O_3$). This acid coagulates the proteids and decomposes the alka-

line salts of milk, and liberates phosphoric acid. This produces gastro-intestinal irritation, and diarrhœa, and is also one of the causes of cholera infantum. The curds formed by souring milk frequently cause trouble in weak stomachs, and result in indigestion and diseases similar to those produced by other irritating matters in the alimentary canal. Curds are often passed through children undigested, seldom in adults. Milk and cheese are often assimilated well together.

The reaction of mother's milk, though somewhat variable, is usually alkaline; that of cow's milk sometimes alkaline, and sometimes slightly acid—hence the necessity often of adding an alkali, like lime- or soda-water, to cow's milk, to make it acceptable to a baby's stomach. The milk of carnivora is acid. Sometimes when milk has become acid, heating it will render it again alkaline, the caloric checking the fermentation by arresting the development of bacteria; a result of the escape of gases. It is said that boiling milk expels about 3 per cent. of gases (C, N, O), and the loss of oxygen (O) diminishes the formation of lactic acid and souring. The boiling, however, renders the taste flat; which may be corrected by pouring, or some other form of agitation, or the addition of ice. The correction of the taste should not be attempted until the milk is to be used. Boiling often causes a thin scum upon the surface, which consists of a layer of albumin, and this is soon followed by another upon removal, the heat coagulating the lactalbumin. Boiling, however, destroys all germs, or at least arrests their development, and renders the pricipitate thrown down by the gastric juice flocculent, instead of bulky like curds. This is too valuable a point to be counteracted by any slight difficulty of digestibility, which Raudnitz and others allege to occur. Boiling thus, and corking tightly in bottles, will preserve milk for a short time. A little sugar helps. Heating in a closed vessel to 250° F. will preserve it for years, or until the air is allowed to reach it. Boroglyceride, boric acid, salicylic acid, etc., are also preservers of milk. Acids in the stomach precipitate caseinogen and form casein, as fibrinogen is precipitated to form fibrin in coagulated blood.

In addition to what has been said above concerning the preservation of milk, a word may not be out of place here in regard to the sterilization of milk for nursing-bottle babies. The simplest method, and one which is generally satisfactory, is to put the nursing-bottle into boiling water for 45 minutes. The bottle should be cleaned very thoroughly beforehand with hot soda-water. To sterilize milk for family use, where it is to be kept for a time before using, put the bottles of milk into a closed vessel of boiling water, the bottles being over the water, not in it, and leaving the corks out of the bottles; boil 10 minutes, then cork them tightly and boil for 45 minutes longer. The milk, still in the corked bottle, should be put into a cool place. Milk thus sterilized will keep for months or years.

One of the most important matters we have to deal with in our treatment of children and delicate patients, is to prepare a food from cow's milk which will agree with weak stomachs or take the place of mother's milk. Dr. Jacobi recommends the following:

Water, 1 pint.
Hydrochloric acid, ½ drachm.
Milk, 1 quart.

Boil 15 minutes, and stir.

This is especially useful in cases of anæmia, gastric ulcer or catarrh, and slow convalescence. Peptonized milk is produced by the fermentative action of some preparation of pepsin upon milk, too much fermentation being prevented by boiling and keeping upon ice. This preparation is valuable in cancer of the stomach. Preparations with pancreatin may be used in the same way.

The proper dilution of milk to suit a baby's stomach is a matter that has caused much thought and care upon the part of the profession. Biedert has made some of the most careful observations. He has found that the average quantity of milk required daily by an infant under four weeks is 13 ounces, and from one to ten months 24 ounces. A child thrives best, he says, upon the minimum amount required for development, which in the first month of life of an infant weighing six to seven and one-half pounds will be 5½ to 6½ ounces of cow's milk per

diem. A child of eight pounds in the second month requires 10 to 22 ounces. In the third month in requires 3 ounces for each kilogramme (2 lbs. 3 oz. 2 drs.) of weight. He also says: (1) Remarkably small amounts of nourishment are sufficient for the development of an infant in the first few weeks of its life; (2) an increase in the amount of fat above what is present in dilute cow's-milk spares albumin, makes digestion easier, and increases the growth of the child; (3) sickly children must be fed with weaker preparations of milk, such as are suitable for infants of younger weeks.

An average artificial milk for children may be prepared by using cow's milk 600 grammes, water 339.5 grammes, cream 13 grammes, lactose or milk sugar 15 grammes, and calcium phosphate 1.5 grammes. Diluted cream is sometimes used with advantage where the casein and other constituents of milk disagree with the stomach, and fats are easily digested. The amount of water used must be adjusted to individual cases.

It must be borne in mind that cream constitutes 8 to 24 per cent. of milk, and that in Alderneys it reaches 30 to 40 per cent., and also that fat globules constitute 14 to 44 per cent. of cream. If the cream agrees, sometimes children thrive well upon it; but it is desirable to add milk to it as soon as the stomach will bear it. It will sometimes take the place of milk for a short time, in the forced feeding which has given such excellent and sometimes almost remarkable results in exhausting diseases like phthisis, melancholia, certain nervous disorders, chronic and obscure bowel diseases, typhoid and other prostrating fevers, including also influenza. The nitrogenous metabolism which is very active in these pathological conditions, is met to a certain extent by the free use of milk, a liter to two liters or more a day, as the patient's stomach and bowels will bear.

In diabetes, the milk should be skimmed, according to many authorities, but Frerichs and others look upon a milk cure in diabetes with disfavor. Skimmed milk has been recommended in Bright's disease, dropsies, and neurotic and hysterical cases. I would suggest that it might be well to boil milk and again skim it, in Bright's disease, to remove as much of the albumin as possible. Personally, I look upon a milk diet with favor in any exhausting disease, believing that the objectionable features are more than counterbalanced by the nutrition and support given to the system. In Bright's disease, I should prefer a milk skimmed after boiling, rather than one skimmed before.

It should be remembered that the milk cure, and of course the continued use of milk, at first increases the pulse and sometimes causes nervousness; the tongue is coated, and often there is a disagreeable taste in the mouth, which may be modified by salt, coffee, caramel, etc.; the water of the urine is increased, there may be obstinate constipation, and the stools at times are hard and of an ochre color; epigastric distress may be present, with a feeling of emptiness; arterial tension is lowered. The weight at first may be diminished. These results being borne in mind, their occurrence will cause no uneasiness.

Whey is a good sudorific and diuretic in fevers. The whey cure is sometimes used in Bright's disease, and in catarrh of the stomach. It has also been found useful to relieve the irritant cough and improve the secretion in chronic bronchitis. It increases the strength of the pulse, but if taken too freely it increases peristalsis, causing diarrhœa with watery stools, colic, and diminished appetite. Not more than 500 grammes need to be taken daily. In Germany and Switzerland it is combined with the grape cure.

Buttermilk I have seen yield valuable results in chronic catarrhal gastritis, where the peptic glands were atrophied and the digestion of peptones and fats impaired. It should generally be used fresh.

I have found many cases in infant-feeding where condensed milk acted well. However, it readily undergoes lactic fermentation when diluted, sometimes causing diarrhœa. It has been used in the treatment of dysentery, and as a prophylactic against scurvy.

The drinking of hot milk will often relieve an irritating cough with tenacious mucus. Milk and sugar of milk have a diuretic action.

Waukegan, Ill.

Correspondence.

WAYNE COUNTY MEDICAL SOCIETY.

JAN. 19, 1893.

President O. S. Armstrong in the chair.

Dr. J. F. McPherson made a verbal report of three monstrosities that he had in his practice. One was a pseudencephalic fœtus, and two were anencephalic. Believed the causes to be the rapid bearing of children. All cases were French or of French descent. In all three cases the labor was tedious and the amount of amniotic fluid was much above normal. The three cases each presented a marked high and large abdomen. All the mothers recovered.

Dr. K. Gunsolus: Never had a case of monstrosity. In these cases there is always a large amount of amniotic fluid.

Dr. James Newell reported a case where there was a foot presentation with prolapsus uteri; also reported a twin monstrosity; each case with a large amount of fluid.

Dr. Samuel Bell reported a case in his early practice with a history of fright at the third month.

Dr. R. Murphy reported three cases in his practice. The first case had a foot presentation; the second did not have a large amount of amniotic fluid; the third was one which had a day set for an operation—ovariotomy.

Dr. D. L. Dakin reported a case where the fœtus's head resembled a frog's head and neck. The mother gave a history of being frightened at the fifth month. Confined the same woman several times afterwards, children presenting a normal continuity. Reported several other cases of monstrosities, but had not noted the excess of amniotic fluid.

Dr. Geo. Dakin reported a case where the parietal bones seemed wanting and the head was very much elongated. Also reported a case of typhoid fever with constipation, the other characteristics of the fever being normal.

Dr. K. Gunsolus reported a case of a girl who had uterine hæmorrhage nine months ago; again several weeks before her death; and one on the day of her death. She had marked and severe pain over lower part of abdomen at 10:30 A.M. Half an hour afterward, clammy sweat, thready pulse, and symptoms of collapse; this was followed by peritonitis and, last, by tympanitis. Post-mortem revealed two quarts of serous fluid, lymphatics enlarged through intestinal tract, and lymph covering peritoneum. Ruptured cyst of right ovary, with ruptured body of ovary, which was not cystic.

FEB. 16, 1893.

Discussion on Dr. C. B. Storrs' Paper: "The Advantage of a Physician Dispensing His Own Medicines." *

Dr. Milligan: I put up some of my medicines, but don't see how a man with a large practice can do it. For all cases of venereal disorders I put up my own medicine.

Dr. Samuel Bell: The physician cannot keep an ample supply of drugs, and so can't be able to make as nice and palatable a mixture as we would wish. A physician is justifiable in prescribing and filling his own prescriptions when he can.

Dr. L. E. Maire: The profession of the druggist is degenerated. He has assumed the position of semi-physician. The rich and the poor alike seek the druggist first, and as a last resort go to the physician. We want a high grade of druggists, good, scientific men; and if this counter-prescribing is not stopped, in ten years the drug stores of our country will be obliged to close their doors.

Dr. R. Murphy: Don't see why a physician should not put up his own medicines. There is no class of people so detrimental to physicians as druggists.

Dr. D. O. Donovan: Would be willing to see the druggist continue if compelled to keep to his vocation.

Dr. W. C. Henderson: Druggists need all their time to prepare and fit themselves as experts in filling prescriptions. Doctors should be allowed to fill and put up their medicines.

Dr. W. D. Mac Quisten: In supplying medicine, a disadvantage would be that in some cases the physician would lose both services and medicine. If we could meet the druggist and have a good, thorough understanding as to the line of action, all

* See MEDICAL AGE, March 25, 1893.

would be well. The physician is used as a catspaw to pull out the chestnuts from the fire, and the manufacturing druggist and so-called chemists get the profits.

Dr. O. S. Armstrong: The majority of druggists in Detroit will not hesitate to refill a prescription when there is printed on the prescription: "Not to be refilled." There is a large class of people who start with the druggist and thereby insure a large extra expense with the extra suffering. We must get at least a small number of reliable druggists who will clear their shelves of all patent medicines, and the physicians of the city to send all their prescriptions to those stores.

Dr. C. Henri Leonard: If we would be a law unto ourselves, and with the assistance of the new manufactory—that is, I mean, have our medicine in the form of a tablet pill—we as physicians would soon get ourselves in the right line. The firm's trademark is always a safe guarantee of the value of a drug.

Dr. J. F. McPherson: I know of a druggist who regularly prescribes and has called on and treated scarlet fever cases. I carry my satchel and try to give something that will meet the immediate symptoms of the case. This insures haste in relieving pain, etc., from the beginning of my seeing the case. My prescriptions have been handed to several others besides the one prescribed for, and refilled and taken by them.

Dr. Gunsolus reported a case of death of fœtus of eight months, which was diagnosed before delivery by manipulating the cord through the unruptured membranes. Delivered by the lower extremities, as there was no material gain to expect from version.

Dr. E. B. Smith reported a case of measles, seen in consultation, with entero-colitis, intestinal hæmorrhage, and death.

MARCH 2, 1893.

Discussion of Dr. John Croft's paper: "Aphthæ." *

Dr. R. H. Honner: I am not clear on the classification of these diseases, as it is said that there are four different varieties. Have not had many cases of these troubles. In thrush the secretions are markedly acid, and an alkaline agent such as sodium bicarbonate will correct this. To destroy the fungi, we must use strong antiparasitics. Would not give honey and borax, but prefer borax and boracic acid.

Dr. C. Henri Leonard: These cases are indicative of their origin. The nursing-tip should be kept clean—boiled at least every second day, and then kept in an alkaline solution. Would second the prescription of Dr. Croft. As to potassium chloride, the good effects of the drug are due to its penetrating powers and its deoxidizing properties. Mercury is good, not for its constitutional but for its local action.

Dr. S. H. Goodwin: When we take into account the "trash" that these little ones take into the mouth, we will not wonder that they have putrid sore-mouth, membranous stomatitis, aphthæ, or cancrum oris. I think the rubber hose and bottle an outrage to the little ones. Have cut open these rubber hose and found them filled with a secretion, the stench from which was unbearable. Advise the mothers to wash the mouths of the little ones with water often. Use saturated solution potassium chlorate; and as regards the ulcerative varieties, touch them with $AgNO_3$ for one application. Have three cases now under treatment where peroxide of hydrogen has been used with the best of results.

Dr. James Newell: We must use something that will destroy these parasitical germs. The potassium chlorate is a powerful irritant, and should not be used indiscriminately. I like bichloride of mercury, dose about $\frac{1}{50}$ grain. In cancrum oris, apply first a solution of cocaine, and follow it with the $AgNO_3$ solution.

Dr. J. R. Kestell: The perchloride of mercury, $\frac{1}{60}$ to $\frac{1}{30}$ grain, is my treatment.

Dr. O. S. Armstrong: The hygienic surroundings are to be looked after, as the source of the trouble is often to be found here, and where the people are ignorant the trouble prevails most. Constitutional treatment is good. The application of tincture iodine in the ulcerative varieties is good.

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*Discussion on Dr. J. R. Kestell's Paper.**

Dr. C. Henri Leonard: When a student is

* See MEDICAL AGE, March 25, 1893.

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about to adopt the medical profession, and asks my advice as to how to start out, I always recommend spending one year, and that the first, in a drug store. I cannot agree with Dr. Kestell and the accepted theory, that pepsin is inert when given with an alkali, as I have often prescribed, as well as taken myself, pepsin combined with bicarbonate of soda, and had the best of results.

Dr. James Newell: Differed from Dr. Leonard and supported Dr. Kestell. Dr. Leonard was benefited by the soda, as it was an established fact that the action of pepsin was destroyed by soda or any other alkali, and that an alkali given before a meal stimulated the glands of the stomach by increasing the amount of acid, and possibly pepsin, or in case of hypersecretion of acid present it would have a neutralizing effect. Would like to ask Dr. Kestell in what manner calomel was altered in passing through the stomach?

Dr. J. R. Kestell: Through excess of HCl or chlorides, a portion of it is liable, unless protected by an alkali, to be converted into corrosive sublimate—$HgCl_2$. Further, when calomel is given for the purpose of acting on the liver or intestines, unless it be protected in passing through the stomach in presence of excess of organic matter, it is very likely to be changed into basic oxide. When medicines given by mouth are designed for points below the stomach, they should be so protected that little modification will take place by the time they reach the intestines proper. The modern capsule (gelatin) seems to offer such protection.

Dr. S. H. Goodwin: Do not agree with Dr. Kestell as to the insolubility of gelatin capsules until they have passed the stomach. Have found by practical demonstration that the ordinary 2-grain gelatin capsules will dissolve in less than one minute.

Dr. James Newell reported a case of an operated abortion, where on arrival there was pain in abdomen, stupor, hyperæmia, dilated pupils; pulse 150, imperceptible; temperature 107½° F. in axilla; flaccid muscles, and involuntary passage from bowels. Treatment, ℥ ss spir. vin. gal. every twenty minutes. On the second day the ovum passed.

March 16, 1893.

Dr. Samuel Bell read a paper on "Physiology and Contra-indications of Artificial Anæsthesia" (see p. 235).

Discussion.

Dr. K. Gunsolus: How are we to diagnose calcareous degeneration? Ten or fifteen minutes before the administering of chloroform, I give morphine ⅛ grain, atropine sulph. $\frac{1}{120}$ grain, hypodermatically; this is no good after narcosis has set in. Do not like ether as well as chloroform; but ether is better in the southern climate, chloroform better in the north.

Dr. James Newell: Have given ether only a few times; chloroform a great number of times, with no deaths. Give the chloroform with some modification of an Eshmarsh inhaler, drop by drop. Believe the cause of death is a moot question. Sometimes the heart will fail to beat, and then death takes place—never recovery. In the suspension of respiration, recovery has been known to follow. Believe the methods of resuscitation are wrong. Ether or alcohol injected, only adds to the trouble. As to electricity, a tetanic action will be the result when the current is applied to the phrenic or vagus nerve; a better way to apply is with a sweeping motion over the chest.

Dr. R. H. Honner: The cause of death is paralysis of some sensory nerve, and in many cases death is caused by paralysis of the respiratory centres. Elevating the chin when respiration is labored is of great benefit, as it changes the position of the hyoid bone and so lifts up the glottis.

Dr. Richard Murphy: Patients die from the fright they experience at the thought of going under the influence of chloroform. Never refuse to give chloroform, except in a marked fatty condition of the heart.

Dr. Hal C. Wyman: There is a possibility of death due to some other cause besides chloroform. In shock, death is due to the stimulation of the pneumogastric nerve. The operation itself may cause death, the result of the stimulant to the inhibitory nerve or centres. In syncope the horizontal position is to be preferred. We get inhibition, and that too much, but what we want is to arrest sensation in the parts to be operated on. All

the anæsthetics are dangerous. Ether has a secondary effect, a profound irritation of the bronchi; sometimes the patient dies several days after the administration of the ether, with a bronchitis. A sound kidney is imperative in the giving of ether; with albumin in the urine, death is the result of the anæsthesia. Upon the other hand, chloroform is given in bronchial and pneumonic troubles with good results. Chloroform is the better of the two.

Dr. O. S. Armstrong related a case where death took place in one of his patients, while taking chloroform. The urine having been examined, an alcohol-chloroform-ether mixture was administered by two experienced and careful medical men. When suspension of respiration was manifested, the tongue was pulled out of mouth, the lower extremities elevated, the faradic current was used over the chest with a sweeping motion, tracheotomy was resorted to and the lungs inflated with a bellows, and artificial respiration in the manner of Marshall Hall was instituted—but all without permanent results. The heart beat several times after the labored respiration was noticed, and respiration was somewhat excited by the different methods, notably the Marshall Hall method.

Dr. Hal C. Wyman: You can stimulate the excitatory nerves, and Nealton's method is good. Chloroform takes the place of the residual air in the lungs after a prolonged anæsthesia.

E. B. Smith,
Secretary.

STATE BOARD OF HEALTH MEETING.

At the meeting of the State Board of Health, at Lansing, April 14, 1893, the members present were: Hon. Frank Wells, President *pro tem.;* Arthur Hazlewood, M.D., Grand Rapids; Mason W. Gray, M. D., Pontiac; Prof. Delos Fall, Albion; and Henry B. Baker, M.D., Secretary.

Prof. Fall mentioned a subject of startling interest as a menace to water-supplies in this State, especially at a time when cholera is expected. He stated that a prominent physician in the southern part of the State had informed him that, as an easy method of drainage in certain localities, it is becoming a custom to bore down through the underlying basin of clay and rock, thus allowing filthy, contaminated water to run directly down into the underground water, which is the best source of water-supply in this State. Except at the first, the water would not be stagnant but running water, and perhaps would not be injurious.

Dr. Baker said that although such water is not stagnant, as it would be moving on the surface and in underground streams, the dirty surface-water goes directly into sources of water-supply, without having undergone the usual nitrification and filtration in passing through the surface soil. He cited a case of a wealthy man in this State who bored such a hole through the clay into which to throw slops, and in that case the slops contaminated his well so that he was obliged to bring water from a distance. He mentioned an instance in Lansing where a cellar was thus drained. He said that there are people who, knowing that drainage can be accomplished by boring, will not hesitate to drain barnyards and other foul places in this way, as they do not realize the danger of contaminating their own water-supply, much less the danger to the entire community.

Prof. Fall said that such contaminated water might be carried long distances into the water-supplies of cities.

Dr. Baker said that it is believed by residents of Jacksonville, Florida, that the source of the water-supply of that city is in the adjoining State of Georgia.

Prof. Fall was made a committee to investigate this subject, and report at the next regular meeting of the Board.

Newspapers can do the people a good service by calling attention to the evil here mentioned.

In his quarterly report, Secretary Baker reviewed the work done in the office, and then presented twenty-one large diagrams which have been prepared for the Board exhibit at the Columbian Exposition. One of these, accurately drawn to a scale, represents the death rate in Michigan from scarlet fever, smallpox, and typhoid fever, before and since the State Board of Health began working for the restriction of these diseases. This diagram shows that the death rate is now less than half what it was from scarlet fever, less than one-fourth what it was from

smallpox, and that there has been a considerable reduction in the death rate from typhoid fever; it indicates the lives saved—from scarlet fever 7,265, from smallpox 1,921, and from typhoid fever 1,671.

One diagram shows "great decrease in sickness from intermittent fever in Michigan in recent years," there being only about half as much sickness from that disease during the last five years as during the first five years of the sickness statistics—1877–1881. This decrease is attributed to the general drainage and consequent warming of the soil.

One diagram shows "very great decrease in sickness from scarlet fever in Michigan in recent years," a decrease of over one-half in the last five years as compared with the five years from 1877 to 1881.

One diagram shows "very great decrease in sickness from diphtheria in Michigan in recent years," a decrease of nearly three-fourths in the five years 1887–1891 as compared with the five years 1877–1881.

Ten of the diagrams exhibit causal relations of meteorological conditions to several important diseases, these contributions to science being from the sickness statistics and meteorological data collected by the Michigan State Board of Health.

Secretary Baker, in his report of attendance at the International Conference of State and Provincial Boards of Health, at New York, April 5–7, stated that "The Conference was called to meet in New York, because it is believed that about 70 per cent. of the immigrants to this country enter through the port of New York. It was called earlier than usual, because of the present threatened importation of cholera, which is widely spread through Russia and is present in other countries in Europe, and is generally regarded by sanitarians as likely to be brought to this country unless extraordinary measures shall be taken throughout this country. The several State and Provincial boards of health in the United States and Canada were well represented in this Conference. The National Board of Health of Mexico sent reports. The United States Government and the Dominion of Canada were represented.

"The International Quarantine Commission, which last summer visited and inspected the quarantine stations from Quebec to the Delaware Breakwater, submitted a report. This showed that, at the time of the inspection, not one of those stations was properly equipped for the most effective work. Inspection by the members of the Conference revealed the fact that there has as yet been no improvement in the equipment at the quarantine station at the port of New York. Dr. Jenkins, health officer of the port, stated that improvements are contemplated which, if made, will greatly increase the capacity of the plant for steam disinfection. He stated, however, that no disinfection of the baggage of immigrants has been done at Hoffman's Island, where the disinfection plant is, since last October. The baggage of a few, who had been exposed to smallpox or other disease on the voyage, or whose baggage was for some reason suspected to be infected, has been disinfected on the vessel on which it came.

"The Conference appointed committees to formulate replies to some of the questions stated in the announcement and programme. One of these committees reported as follows:

"'Your committee recommends that during the presence of cholera in Europe the disinfection of baggage of all immigrants destined for this country should be required, unless disinfected at the port of departure; and that certificates therefor, showing the manner of disinfection, shall be pasted on the baggage.'

"This resolution was combated by Dr. Jenkins, Quarantine Officer at New York, and by others representing States on the seaboard, but was insisted on by the interior States, especially those, like Michigan, to which or through which a large proportion of all immigrants go. Dr. Jenkins' proposed amendment that only baggage from ports reported infected should be disinfected, was voted down, 17 to 7. The resolution was adopted by a large majority. It is doubtful, however, if such disinfection will be done at New York, although the Conference formally protested 'against the continuance of this neglect.'

"The Michigan delegates labored hard to secure disinfection of immigrants' baggage at New York and other seaboard quarantine

stations, and, in case that could not be had, then for a line of disinfection of all such baggage on a line extending southward to the Ohio River from the present Michigan-Canadian line from Sault Ste. Marie to Detroit.

"One committee, of which Prof. Vaughan of Michigan was the chairman, reported detailed plans, which were adopted by the Conference, for a uniform system of inspection service to be established, not necessarily on State lines, in case cholera occurs in some part of this country. Some sections in these plans relate to what shall be required of railroads and transportation companies."

PROGRAMME FOR THE SANITARY CONVENTION.

The thirty-eighth sanitary convention under the auspices of the State Board of Health will be held Thursday and Friday, April 27 and 28, 1893, at the Congregational Church, Stanton, Mich.

The following promising programme has been prepared:

First Session (Thursday, April 27, at 2:30 P.M., standard time).—(1) Prayer. (2) Music. (3) Welcoming address, by Dr. N. E. Bachman, Mayor of Stanton. (3) Response by Hon. Frank Wells, President *pro tem.* of the State Board of Health, Lansing. (5) Address by the President of the convention, Rev. W. C. Burns. (6) Alcohol in Health and Disease. By H. L. Bower, M.D., Greenville. (7) Discussion, led by Mason W. Gray, M.D., member of the State Board of Health, Pontiac.

Second Session (7:30 P.M.).—(1) Music. (2) Restriction and Prevention of the Dangerous Communicable Diseases—(*a*) From the standpoint of a lawyer: By F. A. Miller, Stanton. (*b*) From the standpoint of a minister: By Rev. Charles Nease, Stanton. (*c*) From the standpoint of the health officer and physician: By W. P. Gamber, M.D., Health Officer of Stanton. (*d*) General discussion of the subject, led by Hon. John Avery, President of the State Board of Health, Greenville, and Henry B. Baker, M.D., Secretary of the State Board of Health, Lansing (3) The Water Supply of Stanton. By N. E. Bachman, M.D., Stanton. (4) Discussion of the subject, led by Mason W. Gray, M.D., member of the State Board of Health, Pontiac; and Henry B. Baker, M.D., Secretary of the State Board of Health, Lansing.

Third Session (Friday, April 28, at 10 A.M.).—(1) The Use and Abuse of Tobacco. By L. C. Moore, Stanton. (2) Discussion of the subject, led by Prof. J. E. McCloskey, Commissioner of Schools of Montcalm county, Stanton. (3) Disposal of Waste and Excreta in Stanton. By Allen L. Corey, M.D., Stanton. (4) Discussion of the subject, led by Prof. Delos Fall, M.S., member of the State Board of Health, Albion. (5) Should Stanton have Sewerage? By John W. S. Pierson, Stanton. (6) Discussion of the subject, led by Henry B. Baker, M.D., Secretary of the State Board of Health, Lansing.

Fourth Session (2:30 P.M.).—(1) Diseases of Domestic Animals that are Communicable to Man. What is the State doing about this Class of Contagious Diseases? By Hon. H. F. Hinds, President of the State Live Stock Sanitary Commission, Stanton. (2) Discussion of the subject, led by Oscar Fenn, Stanton. (3) Health and Disease. An address by Prof. Delos Fall, M.S., member of the State Board of Health, Albion. (4) School Sanitation. Prof. J. E. Farnham, Superintendent of Schools, Stanton. (5) Discussion of the subject, led by Prof. W. N. Ferris, Big Rapids, and Charles L. King, M.D., Alma.

Fifth Session (7:30 P.M.).—(1) Music. (2) Restriction of Cholera and Typhoid Fever. By Victor C. Vaughan, M.D., Ph.D., member of the State Board of Health, Ann Arbor. (3) Discussion of the subject, led by Arthur Hazlewood, M.D., member of the State Board of Health, Grand Rapids. (3) Achievements of Sanitation Measured by Vital Statistics. By Geo. E. Willitts, Lansing. (5) Discussion of the subject. (6) Miscellaneous business, resolutions, etc. (7) Closing of the convention.

The objects of the convention are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness and of untimely deaths.

This is not a medical convention, but it is for the people generally.

The admission to all sessions of the convention will be free, and the ladies are cordially and especially invited. The invitation

is especially extended to health officers to be present and take part in the discussions.

All sessions will be held in the Congregational Church, and on standard time.

Authors of papers are requested to limit them to twenty minutes. The speakers who lead the discussions are to be allowed ten minutes each, all others five minutes.

COMMITTEES.

Committee from the State Board of Health.—Henry B. Baker, M.D., Lansing, and Prof. Delos Fall, M.S., Albion.

Local Committee.—Dr. N. E. Bachman, chairman; Dr. W. P. Gamber, secretary; P. S. Dodge, P. T. H. Pierson, H. H. Howe, W. H. Owen, Rev. W. C. Burns, Rev. Charles Nease, C. W. Chapin, John W. S. Pierson, Dr. A. L. Corey, Fred. E. Moffatt.

Executive Committee.—Dr. N. E. Bachman, Rev. W. C. Burns, Dr. W. P. Gamber, P. T. H. Pierson, Dr. Henry B. Baker.

Reception Committee.—W. H. Owen, C. W. Chapin, H. H. Howe.

Music Committee.—Fred. E. Moffatt.

W. P. GAMBER, M.D.,
Secretary.

Stanton, Mich., April 19, 1893.

LOOK OUT FOR TYPHUS—IMMIGRANTS MAY BRING IT, EVEN IF FROM A PORT REPORTED UNINFECTED.

The Secretary of the State Board of Health has issued the following circular letter.

To Health Officers in Michigan:

I am informed by the Inspector of Health for the Province of Quebec that W. J. Cook, an English immigrant from Worthing, Sussex, England, now lying sick with typhus in the Montreal Civic Hospital, embarked at Liverpool, March 16th last, on the Allan steamship Buenos-Ayrean, and landed at Halifax March 29th. On reaching Montreal, March 30th, this immigrant was brought sick out of the Halifax train, and carried to the Montreal General Hospital, where he remained under observation until Saturday, April 1st, when his disease was recognized as typhus and he was removed to the civic hospital.

The U. S. Consul-General at Halifax, in a letter of April 4th, informs me that at Halifax the baggage of immigrants from "Norway, Sweden, Denmark, and Great Britain" is not so rigidly disinfected as the baggage of immigrants from other European countries, and we know that at most of the Atlantic ports such baggage does not undergo any disinfection whatever; and, even if we were to admit that typhus is spread only directly from the infected person, the inspection of immigrants from Great Britain may not be so rigid as from Germany or Russia.

As immigrants coming into this country may have been exposed to the disease at the same time this man was, or to this case of typhus, either on the Buenos-Ayrean or at Halifax, or *en route* by rail to Montreal, this notice is sent to you that you may keep recent immigrants to your locality under surveillance, in order to detect the first symptoms of typhus, should they develop, and isolate the patient before others are exposed to this very dangerous contagious disease.

Very respectfully,

HENRY B. BAKER,
Secretary.

Office of the Secretary of the State Board of Health,
Lansing, Mich., April 11, 1893.

MANIFESTO OF THE SECTION ON OTOLOGY, PAN-AMERICAN MEDICAL CONGRESS.

Honorary Presidents—Drs. Adolph Alt, St. Louis, Mo.; Albert H. Buck, New York; Gorham Bacon, New York; Wm. Cheatham, Louisville, Ky.; Francisco de P. Chacór, City of Mexico; Sebastian Cuervoy Serrano Sancti Spiritu, Cuba; J. C. Connel, Toronto, Canada; Stephen Dodge, Halifax, Nova Scotia. J. B. Eaton, Portland, Oregon; A. A. Foucher, Montreal; John F. Fulton, St. Paul; J. Wilford Good, Winnipeg, Manitoba; Francis B. Loring, Washington, D. C.; Henry D. Noyes, New York; Arturo Costa Pruneda, Santiago, Chili; Charles Inslee Pardee, New York; G. Sterling Ryerson, Toronto, Canada; D. B. St. John Roosa, New York; W. H. Sanders, Mobile, Ala.; Belisario Sosa, Lima, Peru; G. C. Savage, Nashville, Tenn.; J. J. B. Vermyne, New Bedford, Mass.

Executive President—Dr. C. M. Hobby, Iowa City, Iowa.

Secretaries—Dr. Max Thorner (English-speaking), Cincinnati, O.; Dr. H. McHatton

(Spanish-speaking), Macon, Ga. Drs. Fernando Perez, Buenos Ayres, Argentine Republic; Ernesto Mazize, La Paz, Bolivia; Theodora Peckolt, Rio de Janeiro, U. S. of Brazil; J. H. Wishart, Toronto, Canada; Carlos Desvernine, Havana, Cuba; Carlos Esquerra, Bogota, Republic of Colombia; Demertrio Orantes, Guatemala City, Guatemala; H. G. McGrew, Honolulu, Hawaii; Antonio Peñafiel, City of Mexico, Mexico; Dr. Montenegro, Leon, Nicaragua; N. Surh, Montevideo, Uruguay; Focion F. Cordero, Merido, Venezuela.

Advisory Council—Drs. F. N. Lewis, New York; M. D. Jones, St. Louis, Mo.; J. H. Thompson, Kansas City, Mo.; Robt. Tilley, Chicago, Ill.; Thomas E. Murrell, Little Rock, Ark.; N. J. Hepburn, New York; Harold Gifford, Omaha, Neb.; H. C. Hawley, Sioux Falls, S. Dak.; Edward M. Whitney, New Bedford, Mass.; T. J. Tyner, Austin, Texas.

The Section of Otology has been rendered necessary by the fact that, while the treatment of diseases of the ear has in the past been mainly in the hands of ophthalmologists, the recent advances in the study of diseases of the nose and pharynx have necessarily divided the practical work of treatment of the diseases of the ear; so that at present we find these diseases considered by both ophthalmic and rhinologic surgeons. It is hoped that in this section surgeons of both classes may meet, and to this end an effort will be made to secure hours not conflicting with either of the other sections.

Communications in reference to papers should be addressed to the English-speaking Secretary, Dr. Max Thorner, 141 Garfield Place, Cincinnati, O.; suggestions as to work and exhibition of instruments, to the Executive President, Dr. C. M. Hobby, Iowa City, Iowa.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

The North German Lloyd, 2 Bowling Green, New York, offers a reduction of 25 per cent. to the medical men going to and coming from the Eleventh International Medical Congress, on steamer Werra, which is to sail from New York on August 5th and Sept. 9th, and on steamer Fulda, on August 19th. Both these steamers sail to Genoa. The same reduction will be made for the return trips in October and November, on the same steamers, and for the Company's Saturday (off Bremen, Sunday off Southampton) steamers.

The Hamburg-American Packet Co., 37 Broadway, New York, 125 La Salle Street, Chicago, offers a reduction of 25 per cent., both out and return, for all its steamers during the year 1893.

The Compagnie Générale Transatlantique, 3 Bowling Green, New York, offers the rates which are allowed French officers—that is, $63.50 for an $80 accommodation, and $91.50 for a $120 accommodation.

Five other lines decline to make any satisfactory arrangements.

A. JACOBI,
Chairman American National Committee,
110 W. Thirty-fourth St., New York, April 1, 1893.

MEETING OF THE AMERICAN MEDICAL EDITORS' ASSOCIATION.

The eleventh annual meeting of the American Medical Editors' Association will be held in Milwaukee, Wis., June 5, 1893. Dr. Ernest Hart, editor of the British Medical Journal, will deliver the annual address. This will be followed by other addresses and discussions which promise to be of unusual interest to every editor and medical journal in the country.

T. D. CROTHERS,
Secretary.
Hartford, Conn., March 29, 1893.

NOTES FROM THE EXPOSITION CO. CONCERNING THE WORLD'S FAIR.

The Exposition will be opened in readiness for visitors May 1st.

An abundance of drinking-water, the best supplied to any great city in the world, will be provided free to all.

Imposition or extortion of any description will not be tolerated.

Ample provisions for seating will be made without charge.

About 1,500 toilet rooms and closets will be located at convenient points in the buildings and about the grounds.

Free medical and emergency hospital service is provided on the grounds by the Exposition management.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., APRIL 25, 1893.

Editorial.

THE INTERNATIONAL MEDICAL CONGRESS.

The Italian correspondent of the London Lancet affords very complete information concerning this meeting:

"Only six months now divide us from the opening of the Congress, and still the work of preparation proceeds with alacrity. To the lists already given of important provincial committees organized to coöperate with the central committee in promoting the solidarity of the Italian representation, I have now to add that of Milan, over which Dr. Giovanni Rosmini has been elected to preside, the vice-president being Dr. Francesco Denti, and the secretaries Drs. Pietro Ramazzotti, Torquato Sironi, and Giuseppe Pessina. The 'Esposizione,' which is to constitute so useful and impressive a feature of the Congress, has also an organizing delegate from the Milanese province in Dr. Vincenti, well known in every department of practical sanitation. The circular issued by the committee at Milan justly remarks that the profession, not only in the towns, but in the country parishes, includes practitioners of approved knowledge, sagacity, and experience, whose presence at the Congress is on every ground desirable, and to these it addresses an urgent invitation to seize the opportunity of exchanging views with their brethren not less thoroughly equipped from other parts of the peninsula. In this way the 'fratellanza' between all branches and representatives of the healing art in Italy is furthered, as a preparation for that larger 'fratellanza' (or brotherhood) which unites practitioners of all nationalities in the same grand cause of medical science and endeavor. Meanwhile the correspondence between the central committee and the profession in non-Italian countries has fructified satisfactorily. This has been conducted mainly through the presidents of the nineteen sections into which the work of the Congress has been distributed; and the result has been that, partly through direct appeal and partly through intermediate negotiation, men of light and leading in the various subjects these sections cover have promised, or have actually sent in, contributions bearing on the topics prescribed. Within the last few days, in fact, communications in this sense have been received from Great Britain, France, Spain, Germany, Switzerland, Austria-Hungary, Belgium, Holland, Denmark, Sweden and Norway, Russia, Turkey, Egypt, the United States, and Australasia. A representative of the Congress, when passing through Calcutta, had an audience of the Viceroy, and, at the request of the Indian Government, the central committee has instituted in the Section of Hygiene a subsection to deal with Asiatic cholera, its ætiology, its mode of propagation, its prevention, and its treatment. The Surgeon-General (Dr. W. R. Rice) has, I understand, deputed Dr. Cunningham to represent Indian medicine at the Congress. The French Minister of Marine will also send a delegate in the person of the medical officer-in-chief of the navy, Dr. Rouvier, member of the superior council of the sanitary service of the fleet. The Peruvian Government has, further, notified the central committee that its deputy at the Congress will be Dr. Aurelio Alarco, one of the most distinguished consultants in the school at Lima; whilst the Governments of Paraguay, Columbia, and Ecuador have responded to the invitation of the central committee by an undertaking to nominate their representatives *quam primum*. At the Policlinico itself—the seat of the Congress outside the Porta Pia and near the British Embassy—the Palazzo dell'Amministrazione, in which the sittings will be held, is progressing rapidly towards completion. The magnificent cornice of the palace—a *chef-d'œuvre* of the Society of the Stuccatori (artists in stucco ornamentation)—has, thanks to the dry, sunny weather, been brought to a close in a wonderfully short time, the work employing as many as forty hands a day. This part of the building, indeed, will rank as one of the best artistic productions of modern

Rome, worthy of the institution it ornaments and of the Congress which will be the first to witness it."

THE NECESSITY OF OBSERVATION.

Under the title of "A Matter of Observation," the editor of The New York Medical Examiner for March presents a very useful, suggestive, and happy talk to physicians, and especially the younger and inexperienced ones.

He introduces his article by this trite but true quotation from Pope:

"A little learning is a dangerous thing;
Drink deep or taste not the Pierian Spring.
There shallow draughts intoxicate the brain,
And drinking largely sobers us again."

To no class of people does this apply more aptly than to physicians, and especially to medical examiners for life insurance companies. To them a little learning or knowledge is indeed a dangerous thing, dangerous to themselves, dangerous to their patients, and exceedingly dangerous to the financial credit and standing of the institution with which they are connected. A doctor with a little knowledge is liable to destroy the lives of his clients, to bring his company into bankruptcy, and to land himself in prison, if not at the end of a rope at an elevation of about six feet from the earth. It is a dangerous thing to be ignorant under certain circumstances.

But so infatuating, we are told, is it, that shallow draughts or exceedingly small quantities, presumably homœopathic doses, intoxicate the brain, while drinking deeply of the Pierian Spring sobers the victim again—not after the manner of the now fashionable chloride of gold treatment, but after having taken out a prœtic license, according to the most approved methods of that system.

While, therefore, our physician is supposed to be possessed of all the scientific requirements necessary to the prosecution of his profession, how shall he, among other things, make himself a more valuable member of the medical insurance fraternity?

Henry Ward Beecher used to advise his parishoners, as they passed up and down the high-ways and by-ways of life, to keep their eyes and ears open, as by so doing they would see and hear many things which others, having eyes, see not, and having ears, hear not. In other words, he inculcated in them the habit of observing things going on about them—practical, every-day observation.

The habit of observing is a great gift, and is not possessed by all alike; in fact, there are those who do not seem to have that faculty developed in the least degree. They go about as it were blindly, taking no notice of anything beyond that which is absolutely necessary. There are innumerable things which can be learned better by observation than by any other method. The medical student, for instance, may "con" his anatomy or other medical books for an indefinite time with very little advantage to himself; but let the demonstrator of anatomy or the clinical teacher show him the location and relations of the various structures of the body, or the facies of diseases and the practical and appropriate treatment therefor, and we will venture to say that he will know more about these things and remember them longer than he would by studying them without such practical demonstrations; and if such method of study is followed conjointly with reading, he will make a better physician than if such observations were omitted. We say if followed, for in this as in everything else there is a positive and negative, a plus and a minus quantity. Some medical men after they have graduated will fall into a slipshod, happy-go-lucky style of living and practice, while others will always be on the alert for anything new or practical—for something that they did not know before.

As between the physician of the first and the second class, he who has formed habits of observation will make the better examiner; for a medical examiner, to be successful, must be a more or less good business man—and a business man, in order to be successful, must be wide-awake, alert, able to "catch on" and to take all proper business advantage of things with which he has to cope. In the one case he has to deal with commodities, with entities, while in the case of a physician he has to deal with diseases or conditions no less real than in the former instance, to wrestle with which requires an equal degree of skill and capacity; and in both cases, in order to be eminently successful, he must be

abreast of the times. He must have exercised his powers of observation according to his opportunities, in the highest degree possible.

The best examiners are of this class, other things being equal, and such examiners will not be overlooked. They are, and always will be, "wanted." They are the class in whom confidence will be placed. They are the men who will make the selection of risks as near perfection as possible.

To the young physician, therefore, we say: Get all the knowledge possible, for you will find that some day it will be useful in drawing a proper conclusion as to the acceptance or rejection of an applicant, as well as in other ways.

A NEW METHOD OF BONE SUTURE.

Dollinger has made use of a new method of bone-suture in two cases where perforation of the bone could not easily be carried out. The first case was a patient aged 43, with a pseudarthrosis of the right leg, coming on after a fracture which had occurred fourteen weeks previously. At the operation the bones at the seat of fracture were found to be ivory-like, the medullary canal was scarcely visible, and there was no trace of callus formation. The tibia, which was fractured transversely, was sutured with silver wire in the usual way. The fibula was fractured in two places, the middle piece, about four inches long, lying loose. Whilst an attempt was being made to perforate the hard middle piece, it began to separate from its periosteum. Perforation was not further attempted, but a ring of silver wire was placed around the upper part of the upper fragment a little above the seat of fracture, and a similar ring around the upper part of the middle fragment. A piece of wire was then placed on each side of the fragments, parallel to the long axis of the bone and within the two rings encircling the bone. The rings were then tightened up and fixed, and then the longitudinal wires were doubled over and their ends united on each side. By this means the fragments were held in position. The lower end of the middle fragment and the upper end of the lower fragment were next united in the same way, and the ends drawn together. In eight weeks there was complete bony union.

Book Notices.

A Text-Book of the Theory and Practice of Medicine. By American Teachers. Edited by William Pepper, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. In two volumes. Volume I. Published by W. B. Saunders, 913 Walnut St., Philadelphia. 1893.

In the preparation of this work, some of the teachers of practical medicine in leading schools of America have associated themselves, in order that each subject should be discussed by an expert of special authority. It may, then, be said to represent truly the best teaching of the science and art of medicine at the present time in this country. As such it is offered to the medical profession and to the large body of medical students, with the earnest hope that it will be found to meet their needs and to prove a safe guide. Especial care has been taken to provide a strong article on hygiene, including the full discussion of disinfection, isolation, and other principles of preventive medicine. Bacteriology is treated at length by an eminent authority, while in connection with each of the infectious diseases full consideration is given to the nature and cause of the morbid process. The important subject of intestinal parasites is presented with unusual fullness. Here, as well as in connection with bacteriology, no pains have been spared to provide the best illustrations; so, too, wherever the text has seemed to require it, charts and diagrams have been freely used.

The object of the work is essentially a practical one. The subjects are treated in an authoritative manner.

The sections on Symptomatology, Diagnosis, and Treatment are especially full, and many formulæ are admitted.

Many distinguished authors and teachers in the realms of medical and scientific literature are included in the list of contributors to this volume. The following are the names of authors, with list of papers contributed:

By John S. Billings: Hygiene. By Wm. Pepper: Ephemeral Fever and Simple Continued Fever; Typhoid Fever; Typhus Fever; Relapsing Fever; Cerebro-spinal Fever; Influenza; Dengue; Miliary Fever; Milk Sick-

ness; Mountain Fever; Septicæmia and Pyæmia; Leprosy. By James T. Whittaker: Scarlatina; Measles; Rubella; Smallpox; Vaccination; Varicella; Mumps; Whooping-cough; Tetanus; Actinomycosis; Anthrax; Hydrophobia; Trichinosis; Glanders; Foot-and-Mouth Disease. By W. Gilman Thompson; Acute Miliary Tuberculosis; Scrofula; Syphilis; Diphtheria; Erysipelas; Malarial Fevers; Cholera; Yellow Fever. By Horatio C. Wood: General Symptomatology of Diseases of the Nervous System; Mental Diseases; Functional Nervous Diseases; Syphilis of the Nervous System; Organic Diseases of the Spinal Cord and Its Membranes. By William Osler: Organic Diseases of the Brain; Diseases of the Nerves; Diseases of the Muscles; Vaso-motor and Trophic Disorders.

There are three colored plates, covering: (1) Hæmatozoön of Malaria; (2) Areas Involved in Various Forms of Aphasia; (3) Acromegaly.

Supplementing this are fifty-eight illustrations, impressing the lessons of the text.

The work is a record of the latest modern views of the diagnosis and treatment of the diseases it covers.

A very complete index of 40 pages makes the contents readily accessible to the reader.

ELEMENTARY PHYSIOLOGY FOR STUDENTS. By Alfred T. Schofield, M.D., M.R.C.S., Special Lecturer National Health Society; late House Physician to the London Hospital; Author of "Physiology for Schools," "Manual of Hygiene." Published in one handsome volume of 372 pages, and thoroughly illustrated by two colored plates and 228 engravings. Lea Brothers & Co., Philadelphia. Price, $2.00.

Through an error in the AGE, April 10th, Book Notice Department, the title of this book was published without a notice of it, and instead was substituted a portion of a review of a book on skin diseases. The editor desires to set the readers right, and has pleasure in presenting the review in this issue as it should have appeared.

It contains the following twenty-three chapters:

The Phenomena of Life; The Elementary Tissues; Chemical Composition and Metabolism of the Body; The Carbohydrate or Oral Digestion; The Proteid or Gastric Digestion; The Fat or Intestinal Digestion; Absorption; The Blood; The Blood-Vessels; The Circulation; Body Heat; Respiration; The Kidneys; Skin and Fat; Muscles; Mechanism of the Bones and Muscles; Nerves; The Spinal Cord; The Brain; Sight; Hearing; Voice, Smell, Taste, and Touch; Reproduction.

This manual is an attempt to present to the student of physiology the leading facts of the science in a fuller way than is generally found in a work of this size.

This has been accomplished mainly by omitting long discussions of rival views and theories, which are a doubtful help to the commencing student, to whom dogmatic teaching is of most value; by omitting long lists of names (generally polysyllabic) and authorities; and by introducing very sparingly detailed descriptions of the various complicated machines by which the results recorded have been obtained.

The principle that has guided the author in selecting material for the work has been that expressed in these weighty words of Virchow: "Whoever speaks or writes for the public ought, in my opinion, doubly to examine just now how much of that which he says is objective truth. He ought to try as much as possible to have all inductive extensions which he makes, all conclusions arrived at by the laws of analogy, however probable they may seem, printed in small type under the general text, and to put with the latter only that which is objective truth."

This wise suggestion has not been literally carried out in all cases, but it has evidently been the endeavor of the author, while presenting concisely the latest facts in this science, to omit doubtful theories, or, at any rate, to insert them in "small type."

The style is brief and unadorned, but that need not prevent any from finding the book of some substantial help in the study of this fascinating science.

The publishers have presented the book in attractive form. It is thoroughly indexed, which makes reference to its contents easy.

CONTENTS OF THE HOME MAKER FOR APRIL, 1893.

Frontispiece.
Phillips Brooks. Helen Leah Reed.
Dawn (poem). Wm. R. A. Wilson.

Easter Day (poem). M. E. L.
The Clevelands at Lakewood. E. G.
Goethe in Weimar. Jenny June.
Mrs. Gabrielle Greeley Clendenin Lexington.
To a Dark-Eyed Princess (poem). William E. S. Fales.
The Fall of Jason (continued). Willis George Emerson.
An Easter Angelus (poem). Helen Chase.
Homes in Egypt. George Donaldson.
To a Falling Star (poem). James H. Redfield.
The Old Story (poem). Charles Gordon Rogers.
Over the Shoulder is Clover Nook. Cornelia Laws St. John.
Up Hill (continued). Emma M. Connelly.
Moods (poem). Cora Evangeline Bostwick.
The Princess Spring (poem). Lulu W. Mitchell.
The Hayes Home. Pleasant E. Todd.
Miguel of San Miguel. Honda.
The Robin and the Nightingale (poem). Nathan Haskell Dole.
A Little Surprise. Adapted from the French of Abraham Dreyfus.
Topics of the Time. Helen Leah Reed.
Arbutus Blooms (poem). E. H. Chase.
Window and Cottage Gardening. George Ethelbert Walsh.
Decorative Home Art: Fireplaces and Over Mantels; Home-Made Frames for Pictures; Original Designs for Crochet; Little Kings and Queens of America.
With the Housewife: The Bread We Eat; Health Hints; Homes and Home-Building; Home Literature; Notes of Various Interest; Fashions; Progress of Science and Industry.

THE DISEASES OF THE NERVOUS SYSTEM: A Text-Book for Physicians and Students. By Dr. Ludwig Hirt, Professor at the University of Breslau. Translated, with permission of the author, by August Hoch, M. D., assisted by Frank R. Smith, A.M. (Cantab.), M.D., Assistant Physicians to the Johns Hopkins Hospital; with an introduction by William Osler, M.D., F.R.C.P., Professor of Medicine in the Johns Hopkins University, etc. With 178 illustrations. Published by Messrs. D. Appleton & Co., New York. 1893. Price, $5.00.

The tension and strain of modern life make nervous diseases one of the most prevalent of the affections the physician meets with.

In looking carefully over this volume, the reviewer finds not a little that is not incorporated in other books devoted to this subject. The newest developments in European methods are incorporated.

It is profusely illustrated by 178 cuts, which help toward a clear elucidation of many more or less mooted points, and which are novel in that most of them are original and not reproduced from previous works.

It is a most readable and instructive work, and well arranged and systematized for reference and consultation.

It is well printed, in the characteristic tasteful style of the publishers.

PAMPHLETS RECEIVED.

SURGICAL THERAPY OF RECTAL CANCER. By Thomas H. Manley, M.D. Reprint from Merck's Bulletin, February, 1893.

THE SYMPATHETIC NERVE AND ABDOMINAL BRAIN IN GYNÆCOLOGY: ITS REFLEXES AND ITS RHYTHM. By F. Byron Robinson, B.S., M.D., Chicago, Ill.

METHODS OF PRECISION IN THE INVESTIGATION OF DISORDERS OF DIGESTION. By J. H. Kellogg, M.D. Modern Medicine Publishing Co., Battle Creek, Mich. 1893.

THE BICYCLE IN ITS RELATION TO THE PHYSICIAN. By Seneca Egbert, A.M., M.D., Lecturer on Hygiene, Drexel Institute, Philadelphia. Compliments of Albert A. Pope, Boston.

HOMŒOPATHY AND ITS CONGENERS: A Lecture delivered at the Chicago College of Physicians and Surgeons. By G. Frank Lydston, M.D. Fred. Klein Co., Publishers, 32 Market St., Chicago. Price, 25 cts.

PRACTICAL EXPERIMENTS IN THE TREATMENT OF CHOLERA IN ST. PETERSBURG, RUSSIA, AND HAMBURG, GERMANY, IN THE EPIDEMIC OF 1892. By Elmer Lee, A.M., M.D., Ph.B., Chicago, Ill. New York: Trow Directory Printing and Bookbinding Co.

THE FORTHCOMING REPORT OF THE BUREAU OF EDUCATION ON PROFESSIONAL EDUCATION IN THE UNITED STATES. By Bayard Holmes, B.S., M.D., Secretary of the College of Physicians and Surgeons of Chicago. Published at the Office of the Association, Chicago. 1893.

MODERN HOMŒOPATHY, ITS ABSURDITIES AND INCONSISTENCIES. By William W. Browning, A.B., LL.B., M.D., Brooklyn, N. Y. Printed by Wm. J. Dornan. 1893.

This essay was awarded the prize of $100 offered by Dr. Geo. M. Gould, of Philadelphia, and is designed for distribution by physicians in order to disseminate more enlightened views upon the subject of which it treats.

Notes and News.

Boil It Down.—

Just a word to those good doctors
Who are meditating deep
On a paper they're preparing,
Full of thoughts too good to keep—
Boil it down.

'Tis not words, but facts we're wanting;
Therefore prune and pare with pains
Your scholastic evolution
Till an essence pure remains—
Boil it down.

Let the meeting at Milwaukee
Be a feast for every soul
Who attends. And let the papers
Be as brief as Moses' scroll—
Boil them down.

You'll remember former meetings:
There were papers, less or more,
Hardly worth the time to listen—
We have all been there before—
Boil it down.

Welcome every fresh advancement,
Hail each new discovered fact,
But in writing a description
That attention will attract—
Boil it down.

And remember that discussions
Are of interest, all agree;
So your paper should invite it;
Make it short as well may be—
Boil it down.

—W. E. Ward, M.D., Fenton, Mich., in *Journal of American Medical Association.*

The American Medical Association.—

Ernest Hart, editor of the British Medical Journal, has been invited as such by the secretary and chairman of committee of the American Medical Editors' Association to be the guest of the Association at their annual meeting at Milwaukee on June 5, 1893, in a letter in which he says: "The Association of American Medical Editors will hold its tenth annual meeting at Milwaukee—50 miles north of Chicago—June 5, 1893, on the evening immediately preceding the meeting of the American Medical Association at the same place. As secretary and chairman of committee, it gives me great pleasure to invite you to deliver the regular address before the Medical Editors' Association, and be our guest at a dinner given to especially welcome and make you acquainted with us and our work."

Ernest Hart has also received an official invitation from the president, Dr. Hunter McGuire, to be present at the meeting of the American Medical Association at Milwaukee at the same date, and to deliver an address on cholera. Dr. McGuire, in forwarding the invitation, writes assuring a very cordial greeting, and other letters from the leading members of the Association tender equally warm and fraternal assurances.

Both these invitations have been accepted, and there is reason to believe that the occasion will be one which will afford opportunities for the mutual interchange of those professional courtesies and offices of goodwill which fitly express the sentiments and the relatious of members of our Association generally and of its officers towards the cognate bodies and towards the medical profession generally of the United States.—*British Medical Journal.*

The Price of Drugs in Europe and America.—

The Union of Danish Chemists has had prescriptions dispensed at some of the principal drug stores of foreign countries, in order to compare the prices paid for drugs abroad with those current in Denmark. From their inquiry it appears that Denmark is the place where drugs are cheapest. If the Danish rate of prices be taken as 100, we get the following scale:

Norway	116	Switzerland	149
Austria	117	Portugal	163
Hungary	125	Russia	197
Sweden	126	Italy	242
Belgium	141	France	247
Germany	145	England	259
Holland	147	United States	350

New York is the city where drugs are most expensive, for what can be got for twenty-five cents in Copenhagen costs about seventy-five cents in New York.

Mr. Gladstone on Medical Fees.—

There seems to be no end to Mr. Gladstone's feats. He has favored the public with another great speech—that on bimetallism, in the course of which he remarked that many things had risen in value in late years. Oddly enough, among the few things he instanced was the remuneration of medical men. "No one is aware of the increase of fees in the medical profession, and I am bound to say that there are none more nobly earned in the world."—*Medical Record.*

Therapeutic Brevities.

Intestinal Suture by a New Method.—Dr. Kummer has devised a new method of intestinal suture. It consists in dissecting back a sleeve-like circular flap of the serous and muscular coats all around the bowel, for about half an inch, cutting off the projecting mucous and submucous coats at this level, sewing the edge of the latter to the corresponding layers of the other loop prepared in the same way, then doubling in the two redundant flaps or sleeves of serous and muscular tissue so that their serous surfaces are brought broadly in contact, and securing the latter with one or more series of Lembert-Czerny sutures. In this way serous apposition is obtained without rolling in the entire thickness of the edge of the bowel, as in the ordinary method, and the projection of the inverted edges into the intestinal lumen with consequent danger of obstruction is avoided —for when the sero-muscular flaps are folded up against each other they stand outside around the line of suture like a ruff, instead of projecting inside of the bowel like a diaphragm. Dr. Kummer's experiments were confined to dogs.—*Archiv für Klin. Chirurgie.*

Catarrhal Sore Throat in the Lake Region.—Dr. J. M. G. Carter, from a long experience on the shore of Lake Michigan, has noticed that catarrhal disease of the respiratory tract is aggravated by increased ozone. The venous distension produced by cold, damp weather renders the throat more susceptible to the irritating influence of the dry air heavily charged with ozone which succeeds an easterly storm. The northwestern part of the lake region is not only in the track of the greatest number of storm-centres, but it it liable to repeated cold waves following in the wake of these storms. Every element for the production of throat disease is at hand. Dr. Carter finds gargles of milk, shaved ice mixed with cream and a little sugar, sprays of oils, and in croupous cases medicated inhalations and cold compresses, to be of the greatest service.—*Journal of the American Medical Association*, Nov. 12, 1892.

Hystero-Epilepsy. — Commence treatment with a hypodermatic injection of apomorphine, and follow up with P., D. & Co.'s normal liquid of Indian hemp, 3- to 5-drop doses every three to six hours, gradually increased and carefully watched. This treatment cured a case for me in which the whole neighborhood coincided with the opinion of an eminent professor of a medical college: "Young man, that woman has seven devils, and don't feel chagrined if you fail to cure her."—W. K. Harris, M.D., in *Medical World.*

Syzygium Jambolanum in dose of 1½ to 2 grammes daily, increased every third day to 4, 6, 8, 10, 12 grammes, and so on for a month or more, or until the patient had taken 200 grammes of the liquid extract, corresponding to 100 grammes of powdered seed, was given to a diabetic patient by Drs. Raimondi and Rossi (Gaz. Med. Lomb., Jan. 16, 1892). Polyphagia was diminished; polydipsia and polyuria not so much. Sugar decreased from 25 to 12 per cent. There was gain in weight and general improvement.

Diabetes.—The beneficial effect of codeia in controlling the amount of sugar has long been known. Bruce has shown that morphine may act equally well in some cases. Ralfe prefers the latter because of its uniformity and greater power, but believes that to obtain the full benefit of opium some of its other derivatives should be combined with the alkaloids. Thus acetate of morphine in solution may be added to liquor opii.—*Medical Record.*

Buboes.—Buboes are successfully treated by drawing off the pus through a small incision and injecting the cavity with 10-per-cent. solution of iodoform in liquefied vaselin. Le Jollec mentioned this plan in La Sem. Méd., No. 55, 1891. Dr. Otis took it up in this city, and has reported good results, and Dr. Allen has mentioned his success with the same method at the City Hospital.—*Medical Record.*

For Urticaria of Children.—

℞ Chloral hydrat.,
Pulv. camphoræ,
Pulv. gummi arabic., } āā ʒ j.
Triturate to liquefaction, and add;
Cerat. simplicis, ʒ j.
M. S.: Apply topically.

—*L'Union Méd.*, No. 130.

Chloro-Sulphate of Quinine has been introduced, especially for hypodermatic use, as it is soluble in its own weight of water and causes less pain than the sulphate or hydrochlorate.—*Medical Record.*

The Medical Age.

Vol. XI. DETROIT, MAY 10, 1893. No. 9.

Original Articles.

THE ANTISEPTIC TREATMENT OF GENERAL INFECTIOUS DISEASES.

BY DR. E. TROUESSART.

I shall include under the above head the following diseases: Smallpox and varicella, measles and rubella, scarlet fever, erysipelas, mumps, typhoid fever, typhus, epidemic cerebro-spinal meningitis, cholera, yellow fever, sweating sickness, influenza, canine rabies, tetanus, malaria, and syphilis.

VARIOLA AND VARICELLA.

We find in the pustules of variola, in the blood of the portal vein and in the liver and kidney of individuals affected with this disease, microbes of several species (*Micrococcus*), and notably the *Pasteurella Hlavai*, and the *Streptococcus pyogenes* and the *St. variolæ* (Cohn). According to Pfeiffer, these pretended micrococci, which no one has yet succeeded in cultivating artificially, are sporozoa, similar to those of malaria. However this may be, the infectious nature (inoculable and contagious) of the disease is admitted by all authorities. The antiseptic treatment *intus* and *extra* is, then, formally indicated.

Internal Treatment.—The general and intestinal antisepsis may be made with *naphthol* or *betol*, or with *benzo-naphthol*, according to the indications.

In the secondary fever of suppuration of grave confluent variola, M. Audhoui gives the following potion:

Phenic acid, 1 gramme.
Syrup of cinchona, 30 grammes.
Syrup of acacia, 120 grammes.
M. Dose, a tablespoonful every hour.

[This would be equivalent to about one grain of concentrated phenic acid every hour; the vehicle might be acacia syrup, flavored or not with wintergreen and other aromatics. —Tr.]

In hæmorrhagic smallpox, M. Descroizilles gives sulphate of quinine in 2-grain doses every four hours. M. DuCastel gives full doses of perchloride of iron. Salicylic acid and salicylate of soda have also been given, and benzo-naphthol when there was a complication of nephritis.*

Local or External Treatment.—The antiseptic treatment of the vesicles of smallpox presents a question of great importance, as much from the point of view of the general course of the affection, as from that of the cicatrices consecutive to the ulcerations of the derm.

Gueneau de Mussy counsels the following ointment:

Tannin, } ää 2 grammes.
Oxide of zinc, }
Calomel, 0.25 gramme.
Ext. opii, 0.10 gramme.
Simple cerate, 30 grammes.

For local application.

M. Descroizilles prescribes the following:

Collodion, 40 grammes.
Castor oil, 4 grammes.

M. For local application to the vesicles.

Or, in the more grave cases:

Glycerin, 10 grammes.
Soap, 20 grammes.
Ung. hydrarg., 40 grammes.

M. For local application to the vesicles.

Corrosive-sublimate-vaselin (1 to 5 per cent.) may be applied to each pustule separately by means of a little pledget of wadding, the operation being repeated three times a day or even oftener.

Talamon has formulated much more precisely the treatment of smallpox pustules. This is his method: Make ethereal antiseptic pulverizations—with salol if the disease is mild, with corrosive sublimate if the erup-

* It will be seen that there is really no internal antiseptic treatment for variola that can much modify this disease.—Tr.

tion is *coherent-confluent* (not primarily confluent). There is no better spray-solution than the following:

Corrosive sublimate, Citric acid, } aa 1 gramme.
Alcohol, s. v. c.
Ether, q. s. to make 50 c. c.

Spray with this solution three or four times a day to complete desiccation.

The duration of the sprayings is variable: it is customary to stop when the stratum of corrosive sublimate deposited begins to whiten the pustule (this result is obtained at the end of about a minute). In hæmorrhagic or *primarily confluent* smallpox these pulverizations are useless or contra-indicated, but they arrest the evolution of the vesicles in the *abundant* or *coherent-confluent* forms.

A quarter of an hour after the spraying, the nurse will cover the patient's face with a layer of the following ointment, using for this purpose a pledget of cotton-batting, and rubbing in briskly:

Corrosive sublimate, 1 gramme.
Glycerite of starch, 15 grammes.

After the fourth day, the nurse will make only two pulverizations a day, while continuing the application of the ointment as before. The sprayings to be discontinued on the sixth or seventh day.

When the crusts are detached, the physician will substitute for the glycerite-of-starch ointment, *borated* vaselin, and will give the patient sublimate baths (one ounce of corrosive sublimate being dissolved in the water of a full bath).

The eyes are frequently washed in warm boric water. The eruptions of the mouth and throat are treated by antiseptic irrigations and gargles frequently repeated. Every two hours the nurse will paint the mucous membrane of mouth and fauces with a mixture of equal parts of salol and glycerin.

Varicella, an attenuated form of variola, is to be treated according to the same principles, but with less rigor. *Salol-vaselin* or *sublimate-vaselin* will suffice to arrest the evolution of the vesicles and prevent any ulceration of the derm which might cause cicatrices.

I may remark here that vaccination has been employed with success at the very onset of smallpox, as a means of attenuating the manifestations of this disease, and notably the cutaneous eruption which is so dreaded on account of the consecutive cicatrices.

MEASLES AND RUBELLA.

The microbes which have been found in the papules and in the pulmonary secretions of measles have been described by Babes, and characterized under the name of *Streptococcus morbellosus* by Trevisan. More recently, LeBel has found in the urine of children affected with measles a bacillus which he has been able to cultivate, but with which he could not inoculate animals as Babes had done with the streptococcus.

We know that this disease is grave only by reason of the pulmonary complications (bronchitis, pneumonia) which often accompany it. The treatment is that of the complications, which rest in bed or in one's room, and careful hygienic measures, will generally ward off.

Dieulafoy treats malignant measles by baths at 26° C. (78° F.) for twelve minutes, with cold affusions on the head. These baths are repeated every four or five hours till the temperature falls to about 38.5° C. (101° F.), and till the secretion of urine is restored. The skin becomes supple, and the eruption grows paler but pursues its course.

Rubella (German measles) is an attenuated form of rubeola, and presents no special indications.

SCARLATINA.

The microbe considered as the producer of this disease is the *Perroncitoa scarlatinosa* (Trevisan), a transversal diplococcus, *i. e.*, with cells articulated two by two so as to form a double chain. At the same time, in grave cases we find constantly in the organs the *Streptococcus pyogenes;* and Cornil has been led to suppose, by reason of the constant presence of this micro-organism in the grave forms of exanthematous fevers, "that certain known pathogenic microbes, having acquired in particular conditions of environment a special virulence, have the faculty of producing the eruptive diseases." It is possible also that these diseases are constituted by *microbian associations*.

The antiseptic treatment has especially for

its object the benefit of the nephritic complication which is so frequent in this disease. The daily examination of the urine will be a useful guide.

M. Descroizilles gives carbonate of ammonia in grain doses in syrup and peppermint-water.

H. Roger, to combat the nephritis, prescribes the following potion:

Tannin, 0.20 gramme.
Tinct. aconite, gtt. x.
Syrup of acacia, 100 grammes.

M. Sig.: A dessertspoonful every two hours.

Paint over the region of the kidneys with tincture of iodine, or apply a flannel wrung out of hot water containing spirits of turpentine.

Give twice or three times a day a little sweet spirits of nitre with syrup of squills and digitalis:

℞ Spts. eth. nit., f ʒ ij.
Syrup. scillæ, f ʒ iij.
Tinct. digitalis, f ʒ j–ʒ ij.

M. Dose: A teaspoonful three times a day.

Fuchsin in capsules may render service, but it is necessary to insist on vapor baths, especially if there is anasarca, in order to make up for the renal insufficiency and favor the reëstablishment of the functions of the kidneys.

Scarlatinal angina is best treated by irrigations of borax or salol, or gargles of borax. Chlorate of potash in 2- to 5-grain doses is in very general use.

[Phenic acid sprays cannot be too highly recommended:

℞ Acid carbolic, fort., 2½ parts.
Borax, 7 parts.
Glycerin, 10 parts.
Lime-water, 90 parts.

For a common spray atomizer.]

Milk diet from the onset often suffices to prevent renal complications. In grave cases, cold baths may be used, as recommended in the treatment of malignant rubeola.

ERYSIPELAS.

The microbe of this affection (*Streptococcus erysipelatis*) is probably only a variety of the *Streptococcus pyogenes*, the pus microbe. The cultures of the two microbes are identical.

The treatment of this disease should be both general and local.

The *local* or *external treatment* is the more important from the fact that it is possible by antiseptic dressings to localize the inflammation of the skin to the point first affected, and to trace in some sort a line of demarcation which in most cases will not be overleaped by this inflammation. We thus reduce an affection which only becomes grave by its extension, to the proportions of a simple phlegmon.

A great many antiseptics, notably phenic acid, corrosive sublimate, and salicylic acid, have been employed for this end.

Verneuil sprays the part with a 3-percent. phenic acid solution.

Hallopeau employs salicylic acid (solution $\frac{1}{20}$) or salicylate of soda. A mask of linen cloth folded in several thicknesses is soaked in a solution of the sodium salicylate ($\frac{1}{100}$) and applied to the face or other part affected; this is covered with oiled silk to prevent evaporation. The result is very satisfactory; the swelling and tension of the skin diminish and disappear, and, even when the eruption spreads beyond the mask, the pain is much less great and the cerebral symptoms much less intense.

Talamon sprays the following solution over the limiting zone of the erysipelas and a little beyond the swelling, the procedure lasting one minute:

Hydrarg. bichlorid., Acid tartaric, } ää 1 gramme.
Alcohol, 5 c.c.
Sulphuric ether, q. s. to make 100 c.c.

This solution being caustic, it is necessary to protect the eyes, nares, and lips. These pulverizations should be repeated two or three times a day. Employed from the beginning, this treatment will bring on resolution by the fourth day.

In cases of feeble intensity, the medical attendant will content himself with dressings of *salicylate of bismuth* in powder (Marc Sée).

Internally sulphate of quinine and salicylate of soda may be given alternately, with a day of interval between, or salicylic acid may be administered in doses of 20 grains three times a day, provided there are no cerebral accidents or dyspnœa.

As general antiseptics, *naphthol* and *benzo-naphthol* may render service in this disease.

MUMPS.

By its epidemic and contagious nature, and its mode of evolution, this disease resembles the eruptive fevers, and must be regarded as an *infectious parotiditis*, produced by a special microbe which has not yet been isolated.

Bouchard gives the following potion:

Phenic acid, 0.50 gramme.
Sulphate of quinine, } āā 2 grammes.
Salicylic acid, }
Rum, 125 grammes.

M. Dose: A tablespoonful every hour till all is taken.*

Emollient applications of camphorated oil or glycerite of starch, with the addition of opium as there seems to be indication, suffice for the external treatment.

TYPHOID FEVER.

The microbe of this disease is probably the *Bacillus typhosus* of Eberth.

There are few diseases in which rigorous intestinal antisepsis is more plainly suggested, by reason of the ulcerations which are seated in the walls of the intestine.

According to Bouchard, there are four indications to fulfill: general antisepsis, intestinal antisepsis, antipyretic medication, lastly regimen. He begins by a saline purgative; then gives calomel—in the dose of 40 centigrammes (about 6 grains) a day, in twenty doses—for four days, taking care to avoid salivation. He gives quinine only when the temperature exceeds 104° F. in the morning and 105° F. in the evening. Then he gives 2 grammes (30 grains) daily during the first and second week, then 1½ grammes (22 grains) during the third, then 1 gramme (15 grains) only, taking care not to give another dose till after seventy-two hours. General baths at 38° C. (100° F.), cooled by degrees down to 30° C. (86° F.), and repeated eight times in the twenty-hour hours, are only contra-indicated when there is intestinal hæmorrhage or pulmonary hepatization. Beef peptones for nourishment, and glycerin (6 to 7 ounces per day). Vegetable acids under the form of lemon juice.

*These doses seem to the translator to be unnecessarily large in so mild a complaint as mumps.

For intestinal antisepsis, Bouchard prefers *naphthol alpha*, which he administers under the following form:

Naphthol α., } āā 5 grammes.
Salicylate of bismuth, }

M. Divide in chart. No. x. Sig.: Take one powder every hour.

Benzo-naphthol, recently introduced into therapeutics, may be substituted with advantage for naphthol, especially if the kidneys functionate badly. In the latter case, it is well also to avoid salicylate of bismuth.

Dujardin-Beaumetz has long employed the *bisulphide of carbon* as an intestinal antiseptic in typhoid fever. He now prefers *beta-naphthol*, *betol*, and *benzo-naphthol*.

Jaccoud employs alcohol associated with extract of cinchona, and, occasionally, acetate of ammonia. In the most grave cases he gives *hydrobromide of quinine*, 7½ grains every quarter of an hour till four doses are taken, beginning eight hours before the febrile exacerbation.

Hertz prescribes salol associated with salicylate of bismuth, in the dose of 4 grammes (℥ j) a day.

TYPHUS FEVER.

Typhus exanthematicus appears to be produced by a specific *streptobacillus* studied by Hlava, and which is found in the blood, not in the organs.

This disease, rare in France, is treated conformably to the rules of internal and general antisepsis: evacuants at the onset, then quinine, alcohol, naphthol, and benzo-naphthol.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

By its course and its epidemic nature this disease resembles the general infectious diseases. The microbes of various species met at the autopsies have been studied by Cornil and Babes, and by Leyden. The species most frequently found is the lanceolated microbe of Pasteur.

The antiseptic treatment does not differ from that of meningitis, apart from the symptomatic and prophylactic indications proper to epidemic meningitis.

General antisepsis may be carried out.

Paris, France.

(*To be continued.*)

ON PLASTIC MODELS OF SKIN DISEASES AND OF PATHOLOGICAL OBJECTS.*

BY WM. S. GOTTHEIL, M.D.†

Every medical teacher will admit the importance of preserving in permanent form the visual changes caused by disease processes. The evidence obtained by sight is certainly equal in importance to that gotten from all the other senses put together. Instruction without demonstration of the altered part is necessarily imperfect, and makes too heavy a draft upon the student's imagination; so that a merely verbal description produces no adequate mental picture of the condition in question. Clinical instruction, the actual presentation of the disease at the time of its description, is of course the very best and the most satisfactory method of illustration. But it demands room, appliances, and assistants, and involves the handling of large amounts of useless material. And for all the rarer forms of disease it largely fails of its object, since it is quite impossible to exhibit them at a special time as demanded by the scheme of teaching.

Reproduction by the artist's pencil or brush is necessarily imperfect. The flat surface involves the indication of form by lights and shadows, which, however skillfully done, interferes materially with color values. Nor is this all; there is another and still greater disturbing factor, namely, the artist's mind. The personal equation figures so largely in work of this kind that it often deprives us entirely of artistic aid. Many of us have had experience of the difficulty of persuading the artist to see the diseased condition as we see it, and to represent it as we wish others to see it. The fine points of surface, shape, and color are most often lost.

Photography is mechanical, and the personal equation disturbs us much less. But color is fully as important as form as an element of visual perception; it is wanting in photography, though orthochromatic plates give us truer color values than we formerly obtained. Color cannot subsequently be added satisfactorily, and color-photography is still in the far distance. Besides this, the camera gives but the view of a single eye, whilst vision is stereoscopic; hence certain details and effects of form are necessarily absent even in the most perfect photograph. And here I may perhaps be permitted to call attention to the superior value of stereoscopic photographs of diseased parts, to be looked at through an instrument, over those of the ordinary kind.

The method of reproducing pathological conditions which I am going to describe—that of modeling in wax—has its marked limitations, but also its manifold advantages. It is essentially mechanical, and hence is but slightly dependent upon the peculiarities of vision and perception of the artist. As regards form, it reproduces an exact solid image of the affected part. Consequently the stereoscopic effect is entirely preserved, and, so far as outline and shape is concerned, the model is as good as the original. The subsequent application of colors depends, of course, largely for its success upon the skill of the painter; but the actual colors only need be copied; no efforts need be made to indicate lights and shades, prominences and depressions. The artistic task is therefore a very easy one. Given a certain small amount of technical skill in the use of colors, there is no reason why the reproduction should not be most exact.

Certain manifest disadvantages are inherent in the method. Models, though we try our best to make them light, are heavy and cumbrous; they are with difficulty transportable, and require much room for storage. They are expensive, though not more so than good water-color or oil paintings. To make them yourself requires time and care and some little aptitude for the work. But their manifest advantages for clinical instruction, for the preservation of records of rare cases, etc., are so great, that they undoubtedly have a large sphere of usefulness.

Wax-modeling has been developed chiefly to obtain permanent representations of diseases of the skin. Many of these affections are transitory, and difficult to demonstrate in life; others are rare, and the opportunities to observe them must be waited for. Even with the most abundant material at the teacher's disposal, it is difficult to give any-

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thing like a systematic course of clinical instruction; and many very important diseases cannot be demonstrated at all.

Another and very important application of the method has quite recently been found. We are all aware how very unsatisfactory the bleached and distorted pathological specimens of our museums are. It demands a special education *to see into* them those effects of color and shape so very apparent in the fresh object. Now it is perfectly possible to make a model of the specimen or part immediately after the post-mortem, and to color it accurately in accordance with nature, thus obtaining a permanent and truthful image of the diseased organ. A pathological museum composed of such specimens would be more interesting and far more useful than those we possess at present.

The first step in making a wax model from nature is the preparation of the Mould. This is made of plaster-of-paris, of which only the very best variety, that known as "dentist's plaster," is to be employed. Ordinary kinds are imperfectly calcined, and contain sand, straw, and other impurities, which interfere materially with the perfection of the mould. To a quantity of water in a basin, plaster is to be added by sprinkled handfuls until the water absorbs no more. Then, and not till then, must it be thoroughly stirred into a creamy fluid. Stirring before the water has absorbed all its plaster, creates a lumpy mass unfit for careful casting.

Meantime the part to be cast has been prepared by painting it carefully over with a thin oil, such as olive oil. The surface must be thoroughly covered with a coat of fat, lest the plaster adhere to it. This suffices for the small lanugo hairs which cover most of the body; but on distinctively hairy parts further precautions are necessary. If any part of the bearded face, or the head, or the pubic region, is to be cast, the hair must be thoroughly matted together with a stiff glutinous medium; for which purpose I have found resin cerate very suitable. After having gotten all the hairs into one solid mass, it must be freely painted over with olive oil. It is embarrassing to get a pair of long moustaches firmly implanted in a plaster mould.

When the face of the living is to be taken, arrangements must be made for respiration by means of quills or rubber tubes inserted into the nostrils. Care must be taken that the eyes are kept shut, as plaster grit is painful, though innocuous, in the conjunctival sac; and also that the eyebrows and eyelashes escape fixation.

The part must now be surrounded with something to prevent the plaster running too much. Wet towels will do; in the case of an extremity, ordinary sand, dampened, forms a good bed; whilst for the face and other irregular parts, modeling clay, such as is used by the sculptors, is excellent for building dams and limiting the spread of the plaster.

By this time the plaster has begun to thicken, and is ready for casting. It is well to cover the part entirely with a first layer whilst the plaster is still very fluid, as it insinuates itself into all the depressions and markings more readily. Successive masses of plaster are then evenly applied, until a mould of sufficient strength has been built up.

The firm setting of the plaster is shown by its becoming warm. This takes from ten to twenty minutes, in accordance with the consistence of the original mixture, the use of hot or cold water, etc. When thoroughly warm the mould may be removed.

As a rule, we make what is known as "waste-moulds"—*i. e.*, moulds made in one piece, which have to be destroyed to get out the model; since the mass that we are going to employ is inelastic, and does not "give" like skin or leather. If it be desired to use the mould for repeated castings, a permanent mould may be made; but the details of its construction cannot be entered into here. When, however, an angular part has to be cast, or one from which the mould will not readily come off, a well oiled silk thread may be laid on the skin over the most prominent line, with its ends projecting; and before the plaster mass has quite hardened, it should be drawn through it, thus cutting the mould into two parts.

The completed cast is now removed, and is prepared for the wax by building a plaster wall, attached to the greater part of its circumference, so as to form a cup or jug-shaped receptacle. This is necessary to hold the large quantity of fluid wax which must be rapidly poured into the mould, so that the

whole may remain liquid until all parts of the plaster surface are in contact with the material. Thus are avoided the ridgings and imperfections caused by the too rapid hardening and shrinking of the successive layers of wax, which occur if we simply pour a little material into the unclosed mould.

If the plaster cast has just been made and is still quite wet, it need now simply be dipped in water, and set aside to drain. If the plaster is older and thoroughly dry, it should be well soaked for half an hour. The moment to be selected for the casting is when the interior surface of the mould is still appreciably moist to the finger, but all of the water has disappeared from its depressions.

The wax mass that I have found most useful is composed as follows:

	Parts.
White wax	2
Yellow wax	1
Paraffin	1
Talcum	3
Starch	2

The wax and paraffin should be melted together first, and then the starch and talcum, well mixed, should be added slowly, with constant stirring. This must be done only upon the water bath, since a heat greater than 212° F. carbonizes the starch particles before they are thoroughly mixed with the mass, and ruins the casting. The material is to be kept fluid upon the water bath until the mould is ready for it.

The mass is now poured quickly into the cup-shaped mould, and should fill it up to the brim. (If it does not do so, the model will be inperfect and will show ridges that cannot afterwards be well removed.) Then, in a minute's time, the fluid is poured back into the pan. The entire inner surface of the mould is covered with a thin coat of wax; and by repeated pourings of the fluid in and out, the model is strengthened until it is sufficiently thick. One-eighth of an inch is a sufficient thickness for large surfaces, whilst smaller parts and projections (like fingers and toes) should be made solid.

When the wax has become cold, the process of removing the mould begins. This is best done by means of a small, thick-bladed, straight saw. Successive portions of plaster are pried off, care being taken neither to saw into the model nor to crack off outlying portions.

The edges of the model are now to be trimmed, the minute imperfections that occur in the most carefully prepared specimens are to be removed if possible, and the salient points are to be accentuated. This can be done with needles and graving tools. A more finished appearance may be given by rubbing down the entire surface with benzin; but I do not employ it, as it obliterates, together with the imperfections, all the finer markings of the skin.

The model is now wired to a board, and its edges are covered and finished with folds of ordinary muslin steeped in thin liquid glue. These folds are kept in place while wet, with pins; when the glue sets, you get a stiff and immovable mounting.

Coloring and finishing the model in accordance with the copy is sometimes easy, and sometimes very difficult. The attempt to incorporate into the fluid mass, before casting, sufficient color to imitate the natural hue of the skin, is not very successful. A wax colored deep red with carmine oil color, and another colored with Naples yellow, may be kept ready; and small quantities of both may be added to the liquid. Our main reliance, however, is on colors applied after casting.

For this purpose we may use either powdered colors, water colors, or oil colors. Powdered color is to be stippled in with a brush or rubbed in with the finger. It permits of fine gradation of color, and gives a beautiful velvety surface to the model, such as is occasionally seen in some young skins. But it is hard to find powdered colors ground sufficiently fine to prevent the implantation of visible particles in the wax. The surface formed is extremely delicate, and no speck of dust can be removed from it without leaving a mark. But above all, powdered colors are ephemeral; in the course of a comparatively short time they are liable to fade.

Water colors are more permanent, and possess the great advantage of transparency. To apply them to a waxy surface, it is necessary to use a menstruum that mixes both with oil and with water. Turkey-red oil (the "huile tournant"), a by-product of the alizarin manufacture, will do this. For all

purposes where transparency is required, as for the general surface of the skin and that of mucous and serous membranes, water colors must be used.

Oil colors are the best for lesions, the cut surfaces of organs, etc. They are, of course, the most permanent and satisfactory of coloring agents. Where a dull surface is required, a menstruum known as Milk-of-wax is to be used instead of the ordinary siccative or turpentine. Oils are not satisfactory for skin tints, the shiny oil giving the model an unnatural gloss.

A variety of procedures are in use for special cases. The "glance" of the nails is gotten by scraping and polishing the waxy surface. Hair, if necessarily shown, must be implanted—a tedious task. A layer of thick gum arabic over the dried color gives the shining effect of fluid secretions. Scales must be built up by means of successive layers of some liquid glue. Vesicles and bullæ are made by means of mixtures of gelatin, glycerin, and water. Each case will have its problems for the ingenuity of the modeler to solve.

ELECTRICITY AS A THERAPEUTIC AGENT.*

BY JOSEPH HAIGH, M.D.

It is my purpose to urge the claims of electricity as a therapeutic agent to a higher position than most of the profession accord to it.

The kinds or forms of electricity used in medicine of which I shall speak, are the galvanic, or straight current as it leaves the machine, and the faradic or reflected current. With the franklinic form I will not now deal, but I believe that in some forms of chronic disease it cannot be surpassed.

We know that the action of certain chemicals upon certain metals releases the subtile agent we call an electric current; that as the same leaves the machine it does so as a positive force, and that experience has utilized it in medicine as well as in commercial life. How does it act?

If the members present here were to sit down and wait and try to figure out how certain drugs physic, and not give a dose till they knew exactly how it acted, I'll venture that one of their old stand-bys, calomel, would not be found in their list of prescriptions for a long time.

The past experience of man, and our own experience, constitute all we know about anything.

In electricity rightly applied we have a potent agent for good, but it will not cure everything, and it many times fails from faulty apparatus and a lack of knowledge of how to use it. For instance: It makes a wonderful difference which end of a gun you point at a snipe when you go to shoot.

I now propose, in homely English, to give you my own experience in the use of electricity in my practice. I commenced its use in 1886. My teachers had been: Dr. G. J. Engelman in the line of diseases of women, and Dr. Herman, diseases of nervous system—both of the St. Louis Polyclinic; and Dr. Pitzer, who at that time was dean of the St. Louis Electric Medical College. I tried to put into practical use the parts of the information I had retained from their teaching. I have used electricity since, and am using it more every year, and with better results and for a greater variety of troubles.

In the condition of both sexes where there is a lack of assimilation, sleepless nights, poor appetite, nervous apprehension of some impending danger, I use central galvanization by placing an eight-inch bell-shaped negative electrode, covered with membrane and filled with water, over the stomach, and a small sponge-covered electrode over the forehead, top of head, and upper cervical region, the application lasting for three to five minutes, with as strong a current as patient can bear without pain; and I find that usually eight to ten treatments, on alternate days, using the faradic current for a short time each sitting—small electrodes being held in the hands—are all that is usually needed, if due regard be had to hygienic surroundings.

As an illustration: W. A. L——, a young man of good habits, consulted me in the summer of 1886 with the following symptoms: No appetite; vague fear of approaching evil; sleeps very little, and that disturbed; mind settled upon some supposed disease of lungs and kidneys. He had "been the

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round" of physicians near him. I placed him under the above treatment, and in four weeks he was at work hearty and well, and is so to-day.

Now as to "electrical dosage." Let me say right here that I consider the whole paraphernalia of machines used to measure the current a medical nuisance, and a means to enrich a lot of electrical sharks who have them to sell. There is only one place in medicine a milliampere-meter is of the slightest use, and that is where the patient is under chloroform, and I am not in favor of ever using a current strong enough to require that, for I believe better results are secured by using weaker currents and taking more time. I know full well that I will bring down criticism on this point, but I will give you my reasons.

First, the meter claims to measure the dose. Now in therapeutics we wouldn't give the same dosage every day and time, to even the same patient, nor would our patient always stand the same dosage. This is doubly true of electricity, considering the different capabilities of different persons, and even the same person on different days. Then how is the meter used? Why, we run the current up to the degree that our patient can stand well, or our own judgment and experience say is enough, and then we look at the meter and read off the amount; and the very next time you will have to do the same thing, for if your patient is more sensitive he won't stand the same dosage as before. So that, after all, your patient's condition is your guide, just as in giving quinia, and your milliampere-meter is only a superfluity; you are watching it instead of your patient—it is an extra body in your circuit, and, unless as nicely adjusted as a watch, it is a damage as well.

Dr. Engleman, in writing to me in regard to my claims for the intra-uterine curette as an electrode, published in the November number of the Medical World, says: "Your curette as a positive pole is a correct idea, but, like many good things, although the theory is correct, yet the practical difficulties of battery, meter, etc."—Now you see the idea held out is that we need a national museum full of appliances to use electricity in that class of cases under consideration. But we have had too much of this kind of doctrine in the use of electricity. My friends Drs. Ward and McClintock will tell you that in abdominal surgery their instruments and paraphernalia, under the teachings of their masters Tait and Price, are simplicity itself. Then why complicate a valuable agent like electricity when we come to use it? It is practical; and if we as a profession would sit down on a lot of pharmaceutical and battery companies, and secure our own materials through our own people, both electrical and thereapeutical agents would be practical, and we would not be at the mercy of a lot of interested men and companies who are getting rich at our own and our patients' expense, while we eat with a wooden spoon of our own manufacture.

I'll say this: We need a good battery. The expense of that we must now put up with, although it is at present a robbery. But if we have a supply of soft rubber catheters we can do our own insulating, and with our home tinner at hand he can soon turn us out all the zinc plates of all sizes, with copper attachments, we need; and then with some Canton flannel to put on first, and a few chamois skins, we can have our own electrodes of all dimensions needed—and, by the way, far better than those we pay six times as much for. We can, with very little ingenuity of our own, take our old Sims sound, have our blacksmith put a hole in the proximal end of it, and then we can slip over it a rubber catheter and cut off enough of the rubber at the distal end to measure uterus, wrap with cotton, and we have as good an intra-uterine electrode as we need. Have your smith bore a hole in the proxinal end of your curette; you don't need any insulation there to curette for fungous endometritis. Or take any piece of soft iron; wrap with absorbent cotton, leaving one-fourth inch at the end free to serve as an electrode; have a hole bored in the other end for your battery cord; you are then ready to use iodine or anything else in your current.

Don't you see we can get up nearly all of our electrodes for every purpose at home, and make this thing practical and do good work, and get rid of that whole class of complicated machinery that has prevented the profession from using one of the most valu-

able agents in modern therapy, and by taking this course make some battery companies our servants instead of our masters?

I will now call your attention to the use of electricity in chronic suppurative trouble of the middle ear, with, of course, drum-perforation. I use this method: Thoroughly cleanse ear with peroxide of hydrogen pure; then fill ear with clear alcohol, and carry a bulb or olive-pointed electrode well down in the fluid, using such a current as patient can stand. I do this every second or third day, and so far my results have been surprising. You will say it is the chemical agents; but I will reply, I have tried them to see, but without success. I also use iodine in the current, placing it back of the affected ear, making it the positive pole. I will give you an illustration:

J. F. R——; chronic suppuration of both middle-ears, dating from childhood; now 40 years old. This was a bad case, pus continually running down over shoulders, in spite of all precautions. It commenced as a sequel of scarlet fever in childhood. I treated him for twelve weeks, with entire cure of suppurative trouble and also a return of something like half normal hearing power. He can now understand a speaker at a moderate distance, also music, as well as ordinary conversation. I had tried this patient before by other means, and failed.

In catarrh of middle ear, resulting from cold, with partial loss of hearing, I use electricity as the main agent—in fact, outside of general care of health, as the only agent.

Illustration: B. H——; girl, aged 11; loses her hearing in one ear almost entirely, and partially in the other, every time she contracts a bad cold. The only agent I now use in this case is electricity, galvanic current, carried from mastoid to other side. I carry current up till she feels dizzy, then drop back; *séance* three to five minutes. Only two or three applications are needed.

In these cases I carry current up to the point of their feeling dizzy, then drop back. I never continue the sitting over five minutes.

I have used electricity in two cases of exophthalmic goitre (Graves's disease) with gratifying results. In this disease, recognizing the involvement of the great sympathetic, I use central galvanization in connection with the main treatment—which is a direct current through tumor, with iodine in current every second time. I am a great friend of *Cactus grandiflorus* in this or any disease where rhythm of heart is disturbed.

In straight bronchocele I use strong galvanic current through the growth, with iodine in current, and also follow each iodine application with chloroform in current.

Illustrations: Mrs. P——, aged 46; bad case of Graves's disease; eyes greatly protruded; slept with body in upright position and very little; appetite gone; sense of suffocation; body anasarcous. Under above treatment in six weeks' time she was doing her own work; eyes were back to about one-third normal position. She continued in good or fair health for over a year, and then contracted typhoid fever from a child she took care of, and died.

Mrs. H. L——; large double goitre, involving both lobes of thyroid and causing intense dyspnœa. I was fortunate in relieving this case from the very first treatment, and it certainly could not be ascribed to the drug part of the treatment, for that was nearly the same as used by my medical friends who referred her to me, and she was gradually growing worse under their treatment.

In chronic congestion of liver, and in splenic congestion also, I regard electricity as standing, in their treatment, in the same relation to drugs as the wife to the husband, viz., the nobler of the two, and each a helpmeet for the other, together bringing about results that neither can attain alone.

In those obscure thickenings or swellings connected with stomach and intestinal canal, where we are in doubt both in regard to contents and prognosis, let me urge upon you a trial of galvanic electricity. I will emphasize this by an illustration:

Mrs. L—— came under my care Nov. 4, 1891, through the influence of her son-in-law, Dr. Fitzgerald, one of the leading physicians of our county. He had visited her several times at her home in St. Joseph, Mo., and requested her physicians to thoroughly try the effects of electricity. Finally, at his request, she was placed under my charge. I found a solid, hard lump, involving the pyloric end of stomach, and apparently embracing

the greater part of duodenum. It so involved this part that in a few minutes after taking solid food the pain would almost throw her into convulsions, and the bowel near the stomach would apparently be thrown into a complete slip-noose—if you will pardon the term. She was reduced to liquid food, and very little of that. I must confess that a fear of carcinoma made me feel very reluctant about commencing treatment; but inside of a week my doubt gave way to the joy of anticipated success. From the very first treatment the growth began to yield, and I treated her last on Dec. 26th for it, making fifty-two days of treatment, part of the time every third day. I of course used a general tonic treatment, but about the same as she had been growing worse upon. Now for the results: Upon the very closest examination two weeks ago, when she was out on a visit to my friend Dr. Fitzgerald, we could not detect the least bit of a tumor. She does her own work—all of it—and, to use her own words: "I eat anything I please, and all I please, without any inconvenience whatever."

Now, what agent can you make known to our race that could have worked this change? Don't think this statement is overdrawn or can be disputed, for it is as true and susceptible of proof as any fact can well be. You may say, "This is unscientific! You didn't make a diagnosis." Well, we relieved the woman, and she lives to-day, a monument of gratitude, and that is better than correcting a mistaken diagnosis on a post-mortem table —and how many have done this? Don't all speak at once!

I will cite you another case: J. D. C——, aged 40, consulted a Kansas City physician in November, 1888, about a growth or swelling, and on my return from St. Louis I was handed this opinion: "In my opinion, after a very thorough examination of Mr. C——, he has aneurism of abdominal aorta. Have no suggestions to make as to treatment, as it probably admits of no cure." Now, to tell the truth about it, I don't know but my friend was right in his diagnosis, for I am positive that I was right upon a case of subclavian aneurism since, and I treated both the same way, and both swellings subsided till it is with difficulty you can detect them now. Both are at work and have good health, or fair at least; and in their cases, with the exception of a simple tonic, the whole treatment was by galvanism.

In the rheumatic type of neuralgias of this climate, affecting especially the shoulders and sciatic regions, including the so-called lumbagos, I use negative pole over the seat of pain, small sponge; large electrode opposite on abdomen. In this sort of neuralgia of shoulder and arm, put the large electrode over cervical and dorsal nerves supplying brachial plexus, etc., and you will be surprised at the changed condition after a few treatments of these old chronic nightmares of a doctor's office. In the lumbago I have had patients carried into my office who, after fifteen minutes' treatment by strong galvanic current, were able to walk out unattended. Of course, in eight or ten hours the lumbago would again partially reappear, but very rarely after third treatment. If only in these cases alone, a good battery is a priceless instrument. And here, too, medication by drugs cannot be credited; for, in the first place, the patients have had no treatment previous to their visit; and in the second, they have not had time to receive any benefit from the drug side. In all of the above cases of neuralgic trouble, I use small negative electrode over pain, moving it about over whole area of affected part; while placing large electrode over some other part, leaving it stationary, and carrying current up as high as patient can well stand it, maintaining treatment for about fifteen minutes' time.

In acute inflammation of a part, there make your active small pole positive; for you have a positive condition in the joint if it is acute articular rheumatism, for instance, and you therefore require a positive electric force, for, according to electrical laws, "Like repels like."

Illustration: Mrs. Mc—— has an attack of inflammatory rheumatism. I go to see her; she cannot raise either hand off the bed; wrists both badly swollen, red, and painful. I take my battery, put large electrode over cervical and dorsal region, making it negative; then gently stroke wrists and hands with small positive electrode, using as strong current as she can bear, or until she can use her hand with current on without pain. Re-

sult: She uses her hands to help herself forthwith.

I now approach the domain especially claimed by my surgical friends, viz., diseases of the female pelvic region. In doing so I wish to first state that I do not claim that electricity will cure, or even benefit, any cystic tumor of the ovarian group. Why? I believe it is only because the current is diffused by the fluids to such an extent that the effect upon the growth is practically *nil*. The same would hold good of tubes containing fluids. Therefore, in these two places cited, electricity must fail, not because it is not sufficient to do the work, but because the contents diffuse the current, while in a fibroid this does not hold good. A cannon-ball might penetrate an ironclad, and fail on the same thickness of suspended blankets, if the ball had to traverse a water medium till it reached the mark. Therefore I believe these conditions named will not prove amenable to an electric current. But, excluding these conditions—and that is all I propose to yield; I would contend for everything else outside of operations for the restoration of parts—I believe that electricity, rightly, systematically, and persistently applied, will to a great extent relieve, if not entirely cure, the other and most common affections in this region, which make so many of our loved ones miserable invalids. In all cases where exudative material has been thrown out in the neighborhood of the uterus, or even in the abdominal region proper, give me electricity first, last, and all the time. In ovaritis or salpingitis the galvanic battery will beat surely any other measures you may see fit to adopt. In stenosis of cervical canal, what more can you ask in the line of a dilator than a good battery and a graduated set of bulbs upon a negative electrode to relieve those terrible monthly rounds of dysmenorrhœa? Also in stricture of urethra in either sex, the same set of instruments are good enough for me. In hypertrophy of uterus from any cause outside of malignancy, electricity is the agent that will give us the most rapid and lasting results; and let me say, our country is full of women who are suffering from the conditions developing upon a subinvoluted uterus following confinement, which a six weeks' course of electrical treatment would surely relieve, and in most cases cure. I need not refer you to Apostoli's and Keith's results to say that in fibroid growths it has worked marvels. In fungous endometritis, just make your curette a positive electrode, and diffuse the other pole by a large electrode over abdomen, and thoroughly curette endometrium, with all the current turned on that your patient can stand; observe the little loss of blood and the slight reaction following, the little necessity for usual antiseptic details; add to this the assurance that you can send your patient home without fear of inflammatory trouble ensuing; and note the rapid involution following, with relief from the former conditions; and you will never again curette without making your instrument the positive pole of a galvanic battery. I feel sure that this statement is correct when I make it.

I will further illustrate: Mrs. C—— was an invalid for several months following miscarriage at fourth month. Bloody discharge continuously; much emaciated. Came under my charge Sept. 9th; had been under treatment for nearly three months. I found uterus enlarged and ready to bleed at the slightest touch of any instrument; even the introduction of speculum caused bleeding from the cavity. I used curette, making it positive electrode, put her on a tonic, and that was the last of it—she is now hearty and doing her own work.

Another case I will cite you: Mrs. B—— had miscarriage at sixth month, but, although under the care of two very competent physicians—who, it seems to me, had exhausted all of the known therapeutical measures usually adopted in such cases, except electricity,—called me in with them to examine her. She was partially paralyzed in lower extremities; in constant pain, with abdominal enlargement equal to seven months' pregnancy. This enlargement simulated a gourd in shape, filling with large part the whole of left pelvic and abdominal region, with the neck-shaped part extending towards the umbilicus. It distinctly pulsated; was worse at some times than at others, but its pulsations were always present. I will confess I never saw anything like it. In addition she would have hæmorrhage from bowels every two or three weeks.

We placed her under electrical treatment as a forlorn hope, for she was failing rapidly. She commenced to gain from the very first week, but slowly. At the end of three months' treatment she was on her feet again. Then she took influenza, and lost the of use her limbs again, also to some extent the use of her arms, but the swelling kept receding, and we persisted in treating. Finally she regained the use of her hands, then of her limbs, and at the end of nine months the swelling was gone entirely. She is now doing her household duties, and is as well as we could wish. We never ventured upon a diagnosis of the swelling, but it was evidently not connected with the uterus, which was about normal; the miscarriage was, however, without doubt the origin of it.

I call attention to this case as a great point in favor of the use of galvanism, at least for a time, in those cases of abdominal swellings that are obscure, and of which we are in doubt as to their true nature. If it fails, the surgical plan is still open, and I feel sure not compromised in the least by the preceding electrical treatment.

Grenada, Kansas.

ON THE TREATMENT OF DIABETES MELLITUS WITH SALOL.*

BY DR. NICOLAIER.†

It is well known that the therapeutic employment of carbolic acid, as also, particularly, of salicylic acid in the form of the potassic salt, has proven successful in a large number of cases of diabetes mellitus, in so far as each of these agents has at times materially improved the diabetic symptoms, and at times caused them to disappear altogether, even if transiently—a mixed diet being allowed.

The favorable action of these medicaments suggested the thought of instituting therapeutic experiments in diabetes mellitus with salol, which consists of carbolic acid and salicylic acid and which is split up, in the economy, into its two component parts, principally by the action of the pancreatic juice. In the first place, according to past experience—confirmed by the observations made in the Göttingen Medical Clinic—larger doses of salol (2 grammes thrice daily) are well borne by patients for a considerable time. Secondly, through these doses of salol—assuming complete separation of the salol‡—we are permitted to introduce into the human organism, besides larger quantities of salicylic acid, much larger doses of carbolic acid than have been ventured upon hitherto in the treatment of diabetes mellitus—in most instances without, at least, causing injury. As early as 1886, salol was recommended by Sahli in the treatment of diabetes mellitus. Nevertheless, so far as I am aware, Sahli made no therapeutic experiments with the remedy; nor has the experience of any other in this field been yet made public.

[The results, in the various cases treated at the Clinic, are summarized as follows:]

Salol in doses of 6 grammes (2 grammes thrice daily) showed in Case 1 (that of a corpulent diabetic female)—in whose previous treatment, under the influence of an antidiabetic diet, sugar had disappeared from the urine, and whose general diabetic symptoms had been ameliorated—an entirely favorable action, inasmuch as on using this remedy, with mixed diet, the urine became free from sugar in the course of eight days, the proportion of urea in the urine was reduced by a third, the quantity of urine was reduced to its normal volume, and the aggravated thirst and the languor disappeared. Moreover, on discontinuing the salol, with mixed diet the urine remained for nine days almost free from sugar; then the quantity of sugar gradually increased, and concurrently the secretion of urea augmented. Nevertheless, eighteen days after the discontinuance of the salol, the quantity of sugar in the urine amounted to only a third of that secreted under the same regimen, before the salol treatment. Salicylate of soda, likewise, in doses of 5 grammes proved effective in this case, but the benefit was less than that of the

*Translated for THE MEDICAL AGE from the Therap. Monatshefte.

†Of the Medical Clinic of the University of Göttingen.

‡Theodore Husemann is of the opinion that the degree in which the salol is split up in the intestine varies greatly. He believes that only a part of the salol is decomposed—thus explaining the fact that large quantities (even 8 grammes) are borne without collateral effects.

salol, for the salicylate of sodium succeeded in effecting, despite limitation of the carbohydrates in the dietary, only a transient freedom of the urine from sugar, and the secretion of urates was much less considerably reduced. When, with the same diet, the sodium salicylate was replaced by salol, the sugar quickly disappeared from the urine, and the secretion of urates receded further.

In the same manner salol proved effective in the second and third cases in doses of 6 grammes *pro die*. In both instances the patient had been placed on an antidiabetic diet before resort to salol, and under its influence the sugar had in the beginning vanished from the urine; an error in diet, however, caused it to reappear in considerable quantity; and in spite of the continuance of the rigorous antidiabetic regimen, the sugar, while it was indeed diminished, continued to manifest itself in moderate proportions. In both cases, salol manifested the power of rendering the urine in a short time free from sugar—in the second case, to be sure, but transiently. In this instance the augmented secretion of urates and the intensity of the acetone-secretion were not reduced by the administration of salol.

In the fourth case, salol, which here as well was given in doses of 6 grammes, with mixed diet, influenced the diabetic symptoms favorably, but the benefit was imperfect and transient. In the last three cases—5, 6, and 7—salol in doses of 6 grammes *pro die* proved perfectly futile; among these cases was one in which an antidiabetic diet soon caused the sugar to vanish from the urine, while in a second the quantity of sugar in the urine receded under the same diet, the quantity of urates, however, increasing.

As a result of these observations it may be concluded that the action of equally large doses of salol (2 grammes thrice daily) varies greatly in individual cases. In a number of cases it was altogether absent, while in others the salol acted upon the diabetic symptoms with more or less benefit. With respect to the kind of diabetes mellitus in which salol is successfully employed, nothing certain can be said. At all events, as shown by Case 2, even in severe cases a favorable action may be observed. It may be particularly emphasized that the reduction, or rather the disappearance, of the glycosuria, which we observed in our patients after the administration of salol, is not a consequence of inanition. For the patients with whom the salol proved efficacious, always enjoyed a good appetite; in only one case—after, however, the glycosuria had vanished under the action of the salol—did a slight loss of appetite ensue, and for this reason the remedy was at once discontinued. How the favorable action of the salol upon the glycosuria is manifested, cannot at present be explained. That the salol may effect a reduction of the secreted urates while the food-ration remains unchanged, is shown by Case 1—an observation which conflicts with the fact established by M. Kumagawa, that salol produces, at any rate in the dog, a pronounced increase in the decomposition of albumin—amounting in the average to 19 per cent., and in the maximum to 21 per cent., beyond the normal secretion.

Accordingly we have acquired in salol another remedy which, just like its components, carbolic acid and salicylic acid, can cause the temporary disappearance of the symptoms in many cases of diabetes mellitus. With every patient treated by us, there occurred separation of the remedy into carbolic acid and salicylic acid, as the urine always yielded to chloride of iron the reaction characteristic of salicylic urine, and, on addition of bromine water to the distillate of the urines acidulated with sulphuric acid, tribromphenol was deposited.

The alternating, comparative application of salol and salicylate of sodium in corresponding doses showed in one case that the action of the salol was more capable of favorably acting on the diabetic symptoms than the salicylate of sodium. Whether this applies to other cases in which the administration of salol has an equally good effect—on this score we have not as yet been able to collect any data.

With respect to the employment of salol in medical practice in the treatment of diabetes mellitus, in comparison with the dietetic treatment, it occupies, as do all the other medicaments which act on the diabetic symptoms, but a subordinate position, since salol, like the other remedies, is efficacious only in a series of cases, and the action

ceases but a comparatively short time after the discontinuance of the medicament. The prescription of salol is accordingly to be resorted to in those cases of diabetes mellitus in which an antidiabetic regimen is only partially or not at all practicable.

Our observations have shown that salol in doses of 6 grammes (thrice 2 grammes) was usually well borne by our diabetic subjects. Only in Case 2 did we observe a slight prejudice to the appetite. In Case 3, indeed, there ensued ringing in the ears and pains in the gastric region, but the pains vanished when the medicament was administered in wafers; in this case, during the employment of the salol, there were transient traces of albumin in the urine. In one case of diabetes mellitus, with the smaller daily dose of 3 grammes, dizziness and severe ringing in the ears ensued, so that the salol had to be discontinued. One advantage in employing salol is that thereby two medicaments are introduced into the economy, each of which is capable in some cases of diabetes mellitus, under mixed diet, of causing the diabetic symptoms to disappear. In particular, however, is salol to be preferred to salicylate of soda for the reason that, as shown by Case 1, it sometimes exercises a more favorable action. Salol is best administered in wafers. The remedy must be discarded at once upon the appearance of symptoms of intoxication: loss of appetite, nausea, vomiting, ringing in the ears, albuminuria. The existence of albuminuria or nephritis constitutes a contra-indication.

TOXICITY OF SULPHONAL.

Prof. Kast (Arch. f. Exp. Path. u. Pharm., 31, 1), from a study of published cases, gives the following as the chief characteristics of the condition of chronic poisoning by this drug: (1) Disturbances of digestion, as vomiting, diarrhœa, or constipation; (2) of the nervous system, as ataxy and feebleness of the limbs, ptosis, and ascending paralysis; (3) ischuria, oliguria, sometimes albuminuria, or the presence of hæmatoporphyrin. The best hypnotic dose is about 30 grains for a man; for a woman half that quantity. These are maximal daily doses, to be discontinued at the first sign of toxic symptoms, and never in any case to be long continued.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

TWENTY-FOURTH ANNUAL COMMENCEMENT EXERCISES OF THE DETROIT COLLEGE OF MEDICINE.

The twenty-fourth annual commencement exercises of the Detroit College of Medicine were held at the Auditorium on May 4th.

This capacious amphitheatre was equal to the demand upon it, and from the opening exercises to the termination of the reunion at the banquet at the Wayne Hotel the proceedings were conducted with brilliant *eclat*.

The ladies predominated in the audience and brightened the great hall with their presence, adorned as they were in the latest spring costumes, and these were enhanced by many who brought fragrant bouquets for their friends or relatives of the graduating class. Schremser's orchestra helped entertain the many guests with selections from Wagner, Mascagni, Gounod, Suppe, Sousa.

The *tout ensemble* of the graduating class was in numbers and appearance indicative of the prosperity of this flourishing school.

Sidney D. Miller, President of the College, delivered an interesting and instructive historical address. After the opening of the meeting by the Rev. W. W. Carson, Hon. J. Logan Chipman with his well known eloquence very happily gave the graduating class some excellent advice as to their deportment as practicing physicians.

President Miller administered the professional Hippocratic oath, and conferred the degrees upon the following classes:

The graduates in medicine were—M. M. Acker, C. G. Anderson, J. Bettinger, E. W. Bolio, C. B. Bradford, G. E. Brown, E. S. Bullock, D. H. Burley, F. J. Champney, A. Clark, G. W. Clark, M. Coburn, Jr., R. F. Corlett, J. N. Day, Jr., J. J. Delbridge, C. E.

Doyle, G. H. Drake, A. C. Drouillard, E. L. Emmons, F. R. Felt, F. H. Field, D. Graham, R. Graham, C. P. Gowman, H. W. Heasley, J. A. Heasley, W. R. Hobbs, W. H. Hoppenrath, J. J. Howard, S. A. Howard, C. E. Hubbard, A. H. Johnson, O. C. Joslen, W. C. Kitchen, A. C. Lee, A. E. Leitch, C. W. Logan, C. R. Mabee, W. H. Masterson, R. B. Miller, D. J. McColl, J. J. McIntyre, J. Mackenzie, A. A. McLarty, J. M. McMannus, J. L. McTaggart, E. J. Panzner, W. H. Partlow, G. W. Peart, M. W. Peters, J. J. Quinn, F. W. Robinson, E. Rodd, A. E. Savage, R. L. Schorr, C. W. Shaver, R. D. Shearer, J. B. Sloan, G. Suttie, A. E. Thompson, J. S. Timpany, O. T. Toepel, W. H. A. Urquhart, T. H. Walker, A. J. Warren, H. S. Watson, T. Weston, P. S. Wilson, E. T. Wilson.

Graduates in pharmacy—Harry W. Caldwell, Thos. Callan, F. C. Gidday, George S. Kirby, H. H. Rodenbaugh, F. A. Tiller.

Graduates in veterinary medicine and surgery—J. A. Attridge, S. F. Barnes, J. B. Caughey, F. H. Ellis, Orton V. Sanford, J. A. Yoder, F. C. Wells, C. E. Anderson, M. F. Dunn.

Dr. C. A. Davendorf delivered the valedictory address. Dr. E. C. Skinner closed the exercises of the evening by the presentation of three medals, being special marks of commendation from the faculty. The first, fashioned from a $20 gold piece, was awarded to F. R. Felt, of the medical class; the other two, of original $10 gold pieces, were awarded to J. A. Attridge, of the class in veterinary surgery and medicine, and F. C. Gidday, of the pharmacy graduates. Felt and Gidday are from Michigan, and Attridge from Ontario.

Dr. Eugene Smith responded to the toast "The Faculty;" Prof. N. W. Webber, "Medical Ethics;" Rev. W. W. Carson, "Theology and Medicine;" George Alway, "Class of '94;" Charles C. Sherrard, "Pharmics;" J. H. Sloane, "Class of '95;" Dr. D. S. Shattuck, "Dentists." The address of Dr. H. W. Heasley, the valedictorian of the class of 1893, roused the enthusiasm of the graduating class.

The AGE regrets that it cannot give complete the addresses read, as its current number, May 10th, is now in press. No one who attended can but retain pleasant memories of it.

THE RADICAL CURE OF HERNIA—AN ADJUVANT TO THE ORDINARY TREATMENT.

At the Seventh French Congress of Surgery, held in Paris, France, April 3–8, 1893, M. Theriar of Brussels proposed a rather novel expedient to assist in the radical cure of hernia, especially where the difficulties of closure of the internal ring are great. He performs an ordinary herniotomy, dissects out the sac carefully, sews off the superfluous part and removes it. The stump is returned to the abdomen, and a plate of decalcified bone is interposed between the stump and the abdominal wall, being placed in such a way as completely to cover the ring. The dimensions of the bone are larger than those of the hernial orifice. This graft is placed between the peritoneum internally and the abdominal wall externally, and the suture of the different abdominal planes (buried catgut stitches being used) keeps the bony plate in its place.

Theriar has now operated twenty-one times in this way, and has in every case "obtained a firm, solid cicatrix, and in not a single instance has there been a return of the hernia." Several of his cases were very large and intractable hernias that had defied the truss-makers.

This graft, he says, keeps back the peritoneum and plays the part of a support. The bone does not remain long, but is gradually absorbed, and is replaced by solid fibrous tissue "forming a veritable barrier which offers an invincible obstacle to the descent of the intestine."

CHOLERA; CHOLERA MORBUS; CHOLERA INFANTUM; "SUMMER" DIARRHŒA.

It is now generally conceded by pathologists that if these four maladies are not the same specifically—varying only in degree or gravity of manifestation—they are still sufficiently nearly allied to be entitled to the same precise methods of therapeusis.

The researches of Sir Henry MacCormac, and of Cullen, Lever, Harkin, Groneman, Pool-Berry, Bordon-Sanderson, Pisani, Inglott, Cannataci, Stockwell, *et al.*, lead to the belief that all arise from acute poisoning of the central nervous system, manifested chiefly in an irritated sympathetic, whence the copious transudation into the digestive tract that

so dangerously or disastrously depletes the circulatory system.—Both Moreau and Vasquez show that segregation of the sympathetic below the solar plexus induces cholera diarrhœa. The foregoing authors, MacCormac *et al.*, likewise would remedy by striking at the very root of the trouble instead of wasting time endeavoring to combat a complex symptomatology. In other words, the real key to the management of these maladies is to antagonize the toxic factor at its seat, which experience shows may best be done by relieving the sympathetic. This is readily accomplished by stimulating the pneumogastric, which combines with the sympathetic to form the solar, cardiac, and cervical plexuses; and more remotely also both enter into the renal and spermatic.

The success that has attended this method of therapeusis has been phenomenal – its results vastly overtop any other proposed method, as evidenced by Pisani's "Report on the Cholera Epidemic in Malta, in 1887," and by Alexander Harkin and Harry Pool-Berry's "Reports on Cholera, Cholera Morbus, and 'Summer' Diarrhœa."*

The sympathetic may be antagonized in three ways, according to the severity or character of the attack, its classification, or the demand and exigencies of the individual case, viz.:

1. By remedies that antagonize the sympathetic indirectly, through the stomach and solar plexuses—the success of this depends solely upon the proportion of fluids transuded, and the capability of the *prima viæ* for absorption:

2. By inducing mild stimulation of the vagus through its branches on the right side of the head and neck:

3. By profound stimulation of the same on one or both sides of the head and neck.

In the first category, in order of relative value, stand: Chlor-Anodyne; Hydrocyanic acid and its vegetable analogue, the Upas virus; Chloroform; Cannabis Indica; Camphor; Morphine; Capsicum.—Chlor-Anodyne possesses the special advantage of combining all these, the camphor excepted, the place of which latter is well taken by Oil of Peppermint.

The second is best met, perhaps, by the *saturated* tinctures of Ginger and Capsicum of the older British Pharmacopœia, made with absolute alcohol; or, if a more powerful remedy is desired, Essence or Oil of Horse-radish, or Mustard, may be substituted. Whichever is chosen, it should be applied upon, behind, and beneath the right mastoid, and upon the right neck below the ear, and forward to the ramus of the jaw, covering a space of at least three inches square; in some profound cases it should also be extended beneath the eye—Coleman having demonstrated the right pneumogastric controls the small intestine.

The third may consist of either Oil of Horse-radish or Mustard, or the still more powerful Epispastic Liquid of the British Pharmacopœia. With these, both right and left vagi, or the right vagus alone, may be stimulated with most prompt and happy results: Cramps, vomiting, and diarrhœa cease as by magic; even when the patient is in profound collapse, the reaction is most astonishing. The heart-beat becomes firm, the pulse full, and respiration unlabored and free; and, finally, warmth returns to the skin, and the sufferer falls into a profound, refreshing sleep.

Vesication rarely occurs after the second method, and, if due care is exercised, need not always take place with the third; but, even if it should, it is a small matter as compared with the danger to life that threatens from the disease.

That these remedies are not always infallible must be acknowledged; no remedy can permanently maintain such standing as long as human life presents so many and varied aspects. There will occasionally be encountered cases, perhaps by no means the most dangerous to superficial observation, in which the toxicity is so profound before even the first evidences thereof are made manifest, that they are practically hopeless. Again, the cases that to observation appear the most dangerous and threatening are often those that are most amenable to the vagus treatment—it is the middle class cases, so to speak, that are the most delusive.

We have said nothing of the comma bacil-

*See "Cholera: Its Protean Aspects and Its Management," by Dr. G. Archie Stockwell. Published by Geo. S. Davis, Detroit, Mich. Price, $1.00.

lus and its relations to the pathology of cholera, since such in this connection is unnecessary. This germ has been found in so-called cholera morbus, and also in cholera infantum, and if the dicta of the extreme bacillar pathologists were to be followed, all such should obtain the prefix Asiatic. Further, close following of bacillar pathology carries with it certain insuperable drawbacks. As Prof. O. Rosenbach, of Breslau, remarks:* "The practitioner has had to take a 'back seat,' while the test-tube, the microscopical slide, and other instruments of precision, wielded by mere theorists, are usurping his powers and functions. With regard to cholera, it is senseless to base a diagnosis solely on the presence of the comma bacillus, and to be thus compelled to await the results of bacteriological tests before knowing what to do.

"During the recent German invasion, it frequently happened that patients were dead for a day or two before the practitioner was permitted, by the grace of the authorized State bacteriologist, to 'know' that the disease was true cholera. Moreover, the extraordinary fatality of cholera morbus is very suggestive of the possible fallibility of laboratory diagnosis, which disregards all clinical evidences."

Thus, theoretically, bacillar pathology demands, first of all, that the presence of the bacillus must be proven (which requires a laboratory investigation), before intelligent treatment can be followed, during which the life of the sufferer is in the balance: Consequently, if empirical treatment be followed prior to the determination of the presence of the microbe, and recovery or death follow, the existence of the latter is of little moment: Finally, the presence of the microbe determined, theoretically all efforts must be directed toward its eradication, whereas the status of these germs toward the disease has by no means been satisfactorily solved.

*"Der Kommabacillus, die medicinische Wissenschaft und der ärztliche Stand," Münchener Medicinische Wochenschrift, No. 43, 1892.

TREPHINING IN FRACTURES OF THE VERTEBRAL COLUMN.

The first formal operation for the removal of depressed bone in traumatism of the vertebral column was made by Cline in 1814. The operation was unsuccessful, though demonstrating the practicability of such surgical procedures. Cline considered that paralysis sometimes resulted from the pressure upon the spinal cord by the spinous process or arch of the displaced vertebra, whether fractured or not—a condition which he thought analogous to that of the brain when a piece of the skull is driven in upon it and causes symptoms of compression, which are relieved by removal of the cause of the compression. With this notion, he held it feasible to cut down upon the compressing vertebral arch and remove it, and so relieve the palsy.*

Cline's reasoning was perfectly sound: that in fracture with displacement of the vertebræ, compressing the spinal cord, the latter is under precisely the same circumstances as the brain pressed by a fractured skull, and that the elevation of the pressing bone is indicated in the former as well as in the latter case. He added that the only reasonable objection to the operation of trephining the spine is that we cannot, prior to the operation, ascertain whether the cord is simply compressed, or whether it is partially or entirely torn through, or whether the symptoms of compression result from the effusion of blood in different situations.

In the North American Medical and Surgical Journal, July, 1829, Dr. A. G. Smith reported a case in which portions of the third dorsal vertebra were removed for relief of paralysis from fracture. At the time of the report, bed-sores, from which the patient had previously suffered, had healed, and there was return of sensation.†

In the British and Foreign Medical Review for 1838, a successful case is reported in which the operation of trephining the spinal column was made by a Welsh surgeon of the name of Edwards, resection having been made in the lumbar region. Unsuccessful cases were afterwards reported by Tyrell, Barton, Wickham, and others, and the operation came into disfavor among surgeons. Hutchinson's case (1861) resulted in death,

*South's Notes to Chelius' Surgery, vol. i, page 590.

†Quoted by White, "The Surgery of the Spine," Therapeutic Gazette, 1892, p. 670.

and Potter's three cases reported in 1863 were not attended by any improvement.

In 1865 Dr. Robert MacDonnell reported a fatal case of his own, and reviewed twenty-six cases of trephining, in seven of which life was preserved for a long time.* He called attention to cases of temporary paralysis from pressure by pus, in which the cord had entirely recovered, and to similar ones of paralysis from wounds of the spine, followed by recovery on the withdrawal of the foreign body which caused the compression.

In 1865 Dr. Samuel Gordon, in a patient paralyzed from spinal traumatism, performed laminectomy of the twelfth dorsal vertebra, and the operation was followed by healing of a bed-sore, the disappearance of a virulent cystitis, and the return of power over the bladder and of sensation in the rectum, the patient being still alive but unable to stand at the end of five months.

Dr. J. W. White, in his valuable paper on "The Surgery of the Spine," cites eighty cases, in which there were thirty-three recoveries from the operation itself, and forty-seven deaths—a mortality of about 58 per cent. Under careful antiseptic surgery this mortality might, it would seem, be considerably reduced. In those who survived, a varying degree of success was obtained. "In the most favorable, feeble motion in the arms and thighs returned, and the sitting posture became tolerable. In all of them sensation returned more quickly and completely than motion. In nearly all of them the vesical functions, and in one case the rectal, were restored."

The patient of D. N. Knox (Glasgow Medical Journal, June, 1891) was said to have nearly recovered from both sensory and motor paralysis. Knox trephined for fracture-dislocation of the eleventh dorsal vertebra. The laminæ of the tenth and eleventh were removed. The operation was performed thirty-six hours after the injury. Lauenstein's patient (Hamburg, 1886; London Medical Record, March 15, 1887), at the end of six months could walk all day without a cane and go up and down stairs easily. Pean's patient (British Medical Journal, March 23, 1889) rapidly recovered lost power after an operation in which the spinous processes and laminæ of the seventh and eighth dorsal vertebræ were removed. This operation was done very soon after the accident. Dr. Golding-Bird's patient made a complete recovery after an operation for depressed fracture followed by paraplegia; the laminæ of the eleventh and twelfth dorsal vertebræ were removed, also a large extra-medullary clot. Dr. Golding-Bird operated the third day after the injury.

During the past two years the successful cases of operation for the relief of symptoms attributed to injury of the cord after fracture of the spinal column, were: that of Weiss, reported in the Revue Médicale de l'Est, Nancy, France, Feb. 1, 1892; of Ridendour (Cleveland [Ohio] Medical Gazette, July, 1891); of Boyle (Medical and Surgical Reporter, Oct. 10, 1891). Weiss removed the arches of the tenth and eleventh dorsal vertebræ one month after the accident; amelioration promptly followed, and two months later the patient was able to walk. Ridendour operated immediately after the injury, which was extensive and severe—fracture of the laminæ and spinous processes of seventh and eighth dorsal vertebræ, and dislocation of the heads of two ribs and of the body of the seventh dorsal vertebra forward. He removed all the bony roof from the middle of the ninth dorsal to and including the middle of sixth dorsal vertebra. Sensation returned at once in both lower limbs, and the wound healed primarily. Six months later the patient was reported to be able to walk without the aid of a cane. In Boyle's case the operation was done two months after the accident. The bodies of the tenth, eleventh, and twelfth dorsal vertebræ were found to be displaced backwards. The three posterior arches were cut away, "and the posterior part of the bodies was chipped off and shaped up to relieve the cord." Primary union. "Sensation and control of the muscles was slowly regained," and at the time of the report the patient "was able to stand up and walk with the help of parallel bars."

At the Seventh French Congress of Surgery, held at Paris, April 3–8, 1893, Villar of Bordeaux read a paper on "Trepanation for Fractures of the Vertebral Column," and

* Therapeutic Gazette, 1891, p. 670.

reported a case where he operated the fourth day after the traumatism. "The result obtained was a great amelioration." The patient was a workingman "who had received on the back the shock of a weight of 100 kilogrammes." A dorso-lumbar pain manifested itself immediately, with formications in the lower limbs. Villar found a depression in the lumbar region corresponding to the twelfth dorsal vertebra, a complete paralysis of the lower limbs, and sensory anæsthesia as far as the popliteal space. He made a vertical incision 5½ inches long over the seat of injury, with a transverse incision meeting it at the lower part like an inverted T. By dissecting away the skin and muscles, he easily came upon the seat of the fracture. The cord was compressed by several fractured, displaced laminæ; these were removed, and the wound was closed with catgut sutures and dressed with iodoform gauze. Three weeks after, cicatrization was complete, and motility had returned in the right leg, but the anæsthesia persisted. At the time of writing, motion was normal in the right lower extremity, but the left was still partly paralyzed; the anæsthesia was only partial; the functions of the bladder and rectum were restored. Villar, in commenting on the result of the operation, justly remarks: "Trephining in fractures of the vertebral column has not yet given brilliant results. Surgeons generally obtain ameliorations, not cures."

The best results have been obtained (as might be expected) where the operation is done early, before the cord has undergone disorganization. Horsley's dictum has received the assent of most surgeons: that, in fracture of the spine, operation without delay should be resorted to in all cases where displacement or crepitus indicates compression, and where extension directly after the injury clearly fails to reduce the deformity.

One principal difficulty in the operation is to cut through the laminæ without injuring the cord. Some have recommended a dental engine with the attachment of a circular saw. This has been found, in practice, not to be very manageable. Lauenstein employed a chisel. Horsley used a trephine, but says that if more than one arch is to be removed it will be better by means of an angular saw to cut partly through the laminæ along the lines of the sides of the neural canal, and then the division of the bones can be completed with the bone-forceps. White "finds that both trephine and saw are unnecessary, and that the laminæ can be more expeditiously and with equal safety divided by the use of a pair of very strong bone-forceps, either straight or having a large obtuse angle, as may be preferred by the operator. The vertebra at the centre of the incision should be selected, and the vertebral spaces above and below its laminæ should be recognized with the tip of the finger. The points of the bone-forceps should then be placed above and below its edges, and the laminæ cut through by successive short nips, the line of section being as close to the transverse processes as possible. This gives the greatest exposure of the cord and of the membranes."

There are on record some fifty cases where the operation was performed six months and later after the injury causing the paraplegia; we cannot find that these late operations have ever done any good.

TREATMENT OF TUBERCULOSIS BY INHALATIONS OF IODINE AND TURPENTINE.

At the last meeting of the Société de Medicine Pratique,* Paris, France, the subject presented for discussion was "The Treatment of Tuberculosis by Inhalations of Iodine and Turpentine." Dr. Jolly looked upon these inhalations as constituting a local treatment complementary to the internal treatment and intended to obtain for the pulmonary and laryngeal lesions a more direct action of the iodine.

The liquid which he employs has the following composition:

Metallic iodine, in powder, 10 parts.
Alcohol, 20 parts.

Mix in a flask and add:

Essence of turpentine, 200 parts.
Spirit of lavender, 10 parts.

M.

In this mixture, after a very short time and after several shakings, there is no longer any free iodine, although the mixture has a

* Session Feb. 16, 1893.

red color; in reality the iodine exists in the state of a *terebinthinate* compound. It then has no irritant action on the mouth or on the respiratory organs, as when pure iodine is vaporized. In the experience of M. Jolly, this compound has proved to be a very pleasant and efficient pulmonary antiseptic.

Dr. Delthell stated that the above mixture had been used by him in diphtheria. It is very evident that the vapor of iodine associated with that of essence of turpentine has an antiseptic action on the pulmonary passages. Moreover, the general effects of these inhalations are excellent, and phthisical patients improve markedly under them.

Dr. Leon-Petit thought that it was nonsense to talk of rendering the bronchi and alveoli aseptic by any kind of inhalations. All the bacillary theories on which these modes of treatment are based are *ignes fatui* that will only lure the physician away from every truly efficient line of treatment. The microbe can never be reached in this way. We must still rely on the old constitutional, hygienic, and restorative treatment.

Dr. Bardet thought that all the inhalers in common use were bad. All have the disadvantage of obliging the patient to forcibly suck in the air, so that not only does he soon become fatigued, but he is really incapable of making the air penetrate to the alveoli. In order that the respiration may be profound, it must be full; and in order that this may be possible, the patient must be placed in an atmosphere veritably medicinal. This was well understood when formerly we employed the hydrofluoric inhalations, and made our patients sojourn for hours in rooms in which there was complete penetration of what might be called *an aërial solution* of the medicament.

TWENTY-EIGHTH ANNUAL MEETING.

The Michigan State Medical Society will hold its twenty-eighth annual meeting at the Opera House, Muskegon, Thursday and Friday, May 11 and 12, 1893. A cordial invitation to attend is extended to all members of the regular profession of Michigan. The AGE hopes to give a full report of the meeting in the May 25th number.

Book Notices.

SCRIBNER'S MAGAZINE (Exhibition Number).

This is the contribution which the publishers, Charles Scribner's Sons, offer to the World's Fair; and it is certainly no mean gift. As a type of American popular magazine work it is sufficiently advanced to "keep" in the archives of Europe for the next half-century. With 160 pages of text; eleven full-page engravings independent of the text, two of which are finished in colors; innumerable illustrations; and an advertising department of 150 pages adorned with the very latest ideas in this peculiar branch of art, and itself a study of Western ingenuity for the astonishment of European visitors; the whole number fairly glowing with the perfection of its mechanical finish; with all this on the surface, to say nothing of the communications made in the columns of the magazine, it is certainly worthy of a high place in the Columbian Exhibition. But the contents are even more attractive and characteristic. Everything is topical; nothing is heavy. Philosophy and history are admitted only as they can show an artistic front, and behave as to the manner born in the elegant society of wit, good-nature, and a certain levity of wisdom and knowledge. The sort of material to be found in this climacteric number may be inferred from the following array of contributors and the subjects which they treat:

A Daughter of Japan. Frontispiece. Reproduced in color from a pastel by Robert Blum.

The Braddock Campaign (an unpublished autograph narrative). By George Washington. Illustrated by Howard Pyle.

Buddha's Flowers. Drawn by Alfred Parsons.

The Country Printer. By W. D. Howells. Illustrations by A. B. Frost.

Early in the Spring. By Robert Louis Stevenson.

The Parting Guest. By George H. Boughton.

Broken Music. By Thomas Bailey Aldrich.

The Milliner's Bill. Drawn by Irving R. Wiles.

The Reformation of James Reddy. By Bret Harte.

Study Hour. Drawn by Boutet de Monvel.

A Song of Springtime. By L. Marchetti.

The Mirror. Drawn by F. S. Church.
The Upward Pressure: A Chapter from the "History of the Twentieth Century." By Walter Besant.
The Fiddler of the Reels. By Thomas Hardy. Illustration by William Hatherell.
Arcturus. Drawn by J. Alden Weir.
The Middle Years. By Henry James.
A Playmate. Drawn by Albert Lynch.
The Coquette. Drawn by C. S. Reinhart.
An Artist in Japan. By Robert Blum. Illustrated by the author.
The Centaur. Drawn by H. Siddons Mowbray.
The Heart of the Woods. Drawn by W. B. Closson. Original wood-engraving.
Jersey and Mulberry. By H. C. Bunner. Illustrations by Irving R. Wiles.
The One I Knew the Best of All: A Memory of the Mind of a Child. By Frances Hodgson Burnett. Illustrated by R. B. Birch.
Florentine Girls. Drawn by E. H. Blashfield.
Between Mass and Vespers. By Sarah Orne Jewett. Illustrations by C. D. Gibson.
A Quiet Spot. Drawn by Elbridge Kingsley. Original wood-engraving.
Confidences. Drawn by W. T. Smedley.
The Comédie Française at Chicago. By Francisque Sarcey.
The Taxidermist. By George W. Cable.
The Point of View: The Exhibition Number—The Contributing Artists—After-dinner Speeches.

THE ATLANTIC MONTHLY.

This ever-welcome guest celebrates the coming of the May with the following literary banquet:

The Columbian Exposition and American Civilization. Henry Van Brunt.
"'Tis Sixty Years Since" in Chicago. John Dean Caton.
An Island Plant. Mary Catherine Lee.
Admiral Saumarez. A. T. Mahan.
Individuality in Birds. Frank Bolles.
Team-Bells at Dusk. Alfred Wood.
The Old Hall and the Portraits. Sir Edward Strachey.
The Japanese Smile. Lafcadio Hearn.
European Peasants as Immigrants. N. S. Shaler.
The Queen of May. Louise Chander Moulton.
The English Question. James Jay Greenough.
Frances Anne Kemble. Henry Lee.
Hawthorne at North Adams. Bliss Perry.
A Century of French History.
A Poet of Poetry.
Washington Allston.
A Political Abolitionist.
Comment on New Books.
The Contributors' Club: A Social Heresy—A Mood of Weariness—"In Light Marching Order"—The Accolade of Democracy—Poise in Criticism—Compatriots.

CONTENTS OF NEW ENGLAND MAGAZINE FOR MAY.

Phillips Brooks and Harvard University (illustrated). Alexander McKenzie, D.D.
The City of Seattle (illustrated). John W. Pratt.
Maize for the Nation's Emblem (poem). Celia Thaxter.
Life and Study at the Naval Academy (illustrated). Walter G. Richardson, U. S. Navy.
Old Shipbuilding Days at Duxbury. Lucy P. Higgins.
His Last Word (poem). Mary A. P. Stansbury.
Of Love (poem). Irene Putnam.
A Historic Doll (with illustration). Caro Atherton Dugan.
Pietro Mascagni, the Author of the Cavalleria Rusticana (with portrait). Ashton R. Willard.
John Ballantyne, American. VIII–IX. Helen Campbell.
New England Art at the World's Fair (illustrated). William Howe Downes.
A Professional Lover (illustrated). Arthur C. Grissom.
Milton as an Educator. Phillips Brooks.
The Legends of Jekyl Island. Franklin H. Head.
Fruition (poem). Ida Worden Wheeler.
Fisher-Folk (poem). Frank H. Sweet.
At the Meeting of the Circle. Julie M. Lippmann.
Editor's Table.
Omnibus: Aunt Jemima's Quilt. Samuel Minturn Peck.

THE COSMOPOLITAN FOR MAY.

In this number Camille Flammarion continues his weird adumbrations of the final catastrophe, "Omega, the Last Days of the World;" W. D. Howells carries his readers a step further in the artistic evolution of the social problem, "A Traveller from Altruria;" Joseph C. Helm gives an account (illustrated) of Prison Life at Belle Isle during the Civil War; Harger Ragan has an article on "In the Footsteps of Dickens;" W. S.

Merwin discusses the Pedagogical Value of the Novel. J. E. Jones on Lumbering in the Northwest; Mary Bacon Ford on American Society in Paris; Gilbert Parker on the Spoil of the Puma; T. L. James on English Postal Reformers; Arthur Hornblow on Contemporary French Playwrights; Helen G. Ecob on the Crinoline; and Elisha Gray on a Revolution in the Means of Communication, complete the prose contents, with the exception of an estimate of Henrik Ibsen's poems, by Boyesen; Ibsen has also a full-page portrait. There are pictures and poetry galore. Twenty-five cents.

The Engineering Magazine for May.

That this magazine is equal to the demands of that branch of modern science which deals with mechanical constructiveness as a means of wealth-production and an agency of civil life, may be proven by an examination of the May number. We have not space for more than a mere recital of the articles it contains, but these are all by competent writers and are appropriately illustrated. The contents are:

The Cholera Prospect in 1893, by D. B. St. John Roosa.
Ethics of Architectural Competition, by John M. Carrère.
Cotton as a Factor in Progress, by D. A. Tompkins.
The Gravity System of Rapid Transit.
Progress in Steam Engineering.
The Gold-Fields of Dutch Guiana.
English and American Railways.
The Cost of Street-Railway Building.
Prof. Gray's New Telautograph.
The Care of Existing Highways.
Editorials, "Current Technical Literature," etc.

Diseases of the Male Urethra. By Fessenden N. Otis, M.D. Revised Edition. Geo. S. Davis, Publisher, Detroit. 1893. Paper, 25 cents; cloth, 50 cents.

Dr. Otis' book has proved itself a convenience and an authority, not only easy to consult, but well worth consulting, by the busy practitioner who is called upon to treat the various abnormal conditions of the male urethra. The work has been revised by the author, and may be considered up to date. It is one of the Leisure Library series.

Lippincott's for May.

This number contains a complete story by Rosa Nouchette Carey, and in addition: The Society of the Cincinnati (illustrated), by John Bunting; A Pastel (notable stories, No. 3), by Cornelia Kane Rathbone; New St. Louis, by James Cox; Kühne Beveridge, by Gertrude Atherton; Colonel Pope and Good Roads, by Prof. L. M. Haupt; Men of the Day, by M. Crofton; Poems by Louise Chandler Moulton, Arthur D. F. Randolph, Dora Read Goodale, and Charlotte Pendleton; and original illustrated humor.

The Disorders of Menstruation. By Edward W. Jenks, M.D. Geo. S. Davis, Publisher, Detroit. 1893. Price: Paper, 25 cents; cloth, 50 cents.

This is a second and revised edition of Dr. Jenks' brochure published first in 1889. That changes have since that time occurred in the management of the disorders under consideration, the author is well aware, and has made the second edition conform, as far as permissible, to prevalent modes of practice. The work is not intended to be exhaustive, but has decided value as a book of reference.

Pocket Dose-Book. Compiled by John Edwin Rhodes, A.M., M.D. Chicago: Sharp & Smith. 1893.

In this neat little flexible-covered pocket-piece of posology the doses are given in both the apothecaries' weights and measures and in metric terms. The compiler has endeavored to simplify the adoption of the decimal system, and to make the work available by putting it in this very compact, vest-pocket form.

Students' Expenses: A Collection of Letters from Undergraduates, Graduates, and Professional School Students, Describing in Detail their Necessary Expenses at Harvard University. With an Introduction by Frank Bolles, Secretary of Harvard College, Cambridge, Mass. Published by Harvard University. 1893.

Involution Form of the Tubercle Bacillus and the Effect of Subcutaneous Injections of Organic Substances on Inflammations. By Samuel G. Dixon, M.D.

Notes and News.

"The Afternoon Nap."—

The editor of Wit and Wisdom publishes the opinions of a number of eminent correspondents concerning the value of "the afternoon nap." The correspondents are described as "brain workers," which term seems to mean literary and professional men. The replies are as such replies are usually. Our medical readers well know in this, as in other matters, *tot homines tot usus*. One man can work long and well on hours of sleep which would fail to restore another, as one man can use the tobacco or tea which poison his neighbor. Some, who cannot or will not work by day, work by night. Now, other things being equal, the value of morning sleep is less than of sleep by night; it is lighter, and more open to disturbances. He who reads and writes by night finds, at threescore or sooner, that he has unduly taxed his strength; for such a person "the afternoon nap" is clear gain—it adds to the sum of sleep of a sort. Elderly people and bad sleepers often wake very early, and remain awake in spite of the friendly sandwich; for these the later nap is useful. There are, too, hardworked men of naturally feeble powers who benefit greatly by any addition to their hours of sleep; but for the ordinary man who sleeps of an afternoon the judicious physician will prescribe less luncheon. Finally, the value of casual slumbering to persons suffering from "insomnia" is not sufficiently well known. It is too often supposed that sleep is a fund which must be hoarded up for use in due seasons. On the contrary, sleep breeds sleep, and the warm feet, the incurious mind, and the raised position of the easy chair may offer what the softest pillow refuses, and thus the sweet custom of sleep is re-established.—*London Lancet.*

The Ætiology of Influenza.—

There is an interesting contribution on this subject in the March number of the Zeitschrift für Hygiene by Dr. R. Pfeiffer, of the Institute for Infectious Diseases at Berlin. The influenza bacillus grows very rapidly in pure cultures on a suitable soil, but no growth takes place at a temperature under 78.8° F. or over 109.4° F. In water at ordinary temperatures (60° F.) the bacillus dies rapidly (in eight hours). In bouillon it retains its vitality for from fourteen to eighteen days. Hence sputum, etc., if not allowed to dry, is probably infectious for at least fourteen days. The bacillus is very rapidly affected by drying. Cultures exposed to dry air at a temperature of 99° F. did not survive for more than two hours, and even in moist air usually not more than eight hours and never more than twenty. Sputum, if dried, was quite sterile in thirty-four to forty hours. Dr. Pfeiffer draws the following conclusions from these facts: (1) The influenza bacillus is not capable of multiplication outside the human body, either in water or in earth. (2) The spread of influenza by dry sputum can occur but seldom. (3) Infection is, as a rule, effected by means of the still moist secretions of the air-passages. Dr. Pfeiffer considers the catarrhal form of influenza to be by far the most frequent. In mild cases, scarcely to be distinguished from ordinary catarrh, he found the bacillus in enormous numbers in the secretion of the nose (whereas in cases of simple catarrh the secretion is almost sterile and certainly contains no bacterium to be mistaken for the influenza bacillus). During the acute stage the bacillus is present in the expectoration in large numbers. It sometimes persists in it for weeks, or even months. The general symptoms are to be regarded as the result of the absorption of influenza toxine. The bacillus may reach the pleura and there excite a pleuritis. No animal is known to be spontaneously affected by influenza. Guinea-pigs are very susceptible to the influenza toxine, exhibiting symptoms of fever, dyspnœa, and extreme muscular weakness, strikingly resembling the clinical appearances in man.

Limit Papers to Ten Minutes.—

The New York Academy of Medicine, and especially the Section on Pediatrics, has found it an excellent plan to limit the time of reading of papers in medical societies to ten minutes. In large and crowded meetings the long sessions consequent upon thirty- or forty-five-minute papers become wearisome, and interest is bound to flag. By beginning

without excuses or preambles, by condensing the substance of the offering, and by ending when done, few or no papers would suffer by limitation to a ten-minute presentation. Explanations, notes, and details may, if desired, be printed, but busy men want the essence of the matter promptly and clearly. But whether ten or fifteen, or even twenty minutes, be allowed, let the rule never be broken: To pass no vote to give a reader more time. If given to one for the sake of courtesy, it must be to others—with the result we all know!—*Medical News*, March 18, 1893.

The Lancet on Chicago's Drinking-Water.—

The London Lancet having appointed a special commission to examine the Chicago water system and collect specimens of river, lake, and other water for microscopical investigation in London, and the work of the commission and the experts having been concluded, all present or prospective visitors to the Fair are interested in the verdict. The Lancet sums this up as follows:

"The water supplied to Chicago from Lake Michigan is of good quality throughout; and, provided that it be filtered efficiently, and boiled, no chemical objection to its use as a potable water, on the score of organic impurity, can be raised. That it is liable to very serious pollution so long as the vilest refuse of the city is thrown into the lake, has already been pointed out; but there is no evidence to be gleaned from the results of chemical analysis that this, up to the present time, has actually been a source of mischief to the water. There is not sufficient information for considering accurately the effects upon health, though the high death-rate of the city from typhoid fever needs inquiry."

The Boston Medical and Surgical Journal remarks that the conclusions of this investigation are certainly milder in their general tone than the statement of the observations and results obtained would have warranted.

A Grand Biological Laboratory.—

Professor C. O. Whitman, of the University of Chicago, in the Popular Science Monthly for February urges the claims of biological science for an extension and liberal endowment of the present Marine Biological Laboratory at Woods' Holl, Mass., so that it may be made a grand non-sectarian centre for the pursuit of a knowledge of the fundamental conditions of life by investigators and students from every part of the country, and especially from medical colleges. During 1892 the attendance at the laboratory numbered 110, representing 52 institutions of learning. Professor Whitman is supported in his views by Huxley, Vogt, Dohrn, Haeckel, Lankaster, Weismann, Leukart, Gegenbauer, and other leading scientists.

Section of Diseases of Children—American Medical Association.—

The preliminary programme of this section has been issued, subject to revision by the Committee of Arrangements. It contains a list of thirty papers, many of them by well known writers, covering especially the throat and lung diseases that prove so fatal to children when not rationally and promptly dealt with; cardiac, gastric, intestinal, and other disorders are also down on the list for a fair share of attention. The officers of the section are: C. G. Jennings, chairman, Detroit, Mich.; F. S. Parsons, secretary, Northampton, Mass. Executive Committee — Wm. Perry Watson, Jersey City; W. S. Christopher, Chicago; E. F. Brush, Mt. Vernon, N. Y. The services of an expert stenographer have been engaged, and especial attention will be given to the publication of full and accurate reports of all discussions.

Legal Control of "Patent Medicines."—

A bill is pending in New York to give the State Board of Health the power to analyze patent or proprietary medicines. Receipt of a fee of $50.00 makes it compulsory upon the Board to make the analysis.

Another bill has also been introduced, making it a misdemeanor to sell or offer for sale such compounds, not prescribed by a physician, without the approval of the State Board of Health.—*Medical News*.

Professor Koch has a Better Cure.—

A cablegram from Berlin to the Sun says: "Professor Koch's experiments with bacteriological remedies for consumption have al-

most reached a point where he can make a definite claim of results which were prematureiy asserted three years ago. Professor Scaglione, of Paris, quotes Dr. Koch as saying that the liquid which he has produced in his laboratory shows marvelous efficacy in overcoming tuberculosis. He administers the remedy by inhalation, not by injection as in the case of the lymph which gave him world-wide fame a few years ago."

Protection Better than Treatment.—

So far as cholera is concerned, an ounce of prevention is better than twelve million pounds of cure. This is mathematically stated by Dr. H. Klemperer, who says: "One can with certainty immunize against cholera with milk or blood-serum of an animal recovered from the disease, but cure of a disease already commenced is much more difficult and requires much larger quantities of the antidote. Where 1 c.c. of a fluid is sufficient to immunize, 1,000 c.c. will be required to cure a commencing disease. If the disease has already made some progress, 100,000 c.c. will be required; and if the disease is well advanced, 100,000,000 c.c." Dr. Klemperer has immunized guinea-pigs with 0.01 c.c. of goat's milk, but he has never succeeded in curing a guinea-pig already diseased with it. —*Medical Record*, March 25, 1893.

Prize for an Essay upon Epilepsy.—

The Belgian Academy of Medicine has offered a prize of 4,000 francs ($800) for the best essay upon the pathology and treatment of epilepsy. Papers in competition must be presented before Feb. 1, 1894.—*Medical Bulletin*, March, 1893.

A Medical Bicycling Club.—

Cycling has taken a firm hold on many members of the medical profession, young and old, and the Brooklyn Medical Journal suggests the formation of a Medical Cycling Club.

Government Aid for the Pan-American Congress.—

It may not be generally understood that the Sundry Civil Bill appropriated $15,000 for the entertainment of the Pan-American Medical Congress.

Therapeutic Brevities.

Cocaine in Treatment of Variolous and Varioloid Infection.—In the March number of the American Journal of the Medical Sciences, Dr. Edward Pepper, of Algiers, contributes a paper on the use of cocaine in the treatment of smallpox and varioloid; he concludes that the judicious use of cocaine will arrest the varioloid poisoning to a marked degree, and that toleration of the drug beyond the ordinary laws of posology may be established.

It should be given by the stomach, a 4-percent. solution four times a day, the dose being one drop for each year of age—thus a child 10 years of age is to have 10 drops. Cocaine can be given in pastille, $\frac{1}{24}$ grain in each pastille, with or without pepsin. When given by suppository, intervals of six or eight hours may elapse; the quantity in twenty-four hours the same as by the mouth. It can be given hypodermatically in incipient cases of smallpox, or where conditions are such as to preclude the use of other methods —the dose to be one-fourth of the quantity given by the mouth. However given, the patient should be watched closely for idiosyncrasies. If toxic effects are developed, stop the drug and use proper antidotes.

Topical treatment, by use of boric acid or salicylic acid, may be given; but when cocaine is used methodically, topical treatment has been slight and sometimes unnecessary. —F. P. N., in *The Medical Fortnightly.*

Injections of Blood in Pneumonia.—Dr. Fourrière reports a single case of a patient in whom, during an attack of epidemic influenza of a month's duration, a pneumonia supervened. Treatment by means of sinapisms, alcohol, ether, digitalis, inhalations of oxygen, was without beneficial result. On the eighth day two injections of about three drachms of goat's blood were made, which were followed by an amelioration of the symptoms. Four days after, a second injection was made. Two days later, hypodermatic injections of strychnine were added, and upon the next day an injection of six drachms of blood. Improvement now commenced and continued to complete convalescence. The observations of Bertin and Filleau have shown that these injections have a bactericidal action and are at the same time powerfully tonic. The blood is withdrawn by an aspirator-needle from the jugular vein of the animal.—*Réportoire de Thérapeutique*, 1893, No. 1, p. 24. (The point of injection, the details of technique, and the precautions observed, are not stated).—*American Journal of the Medical Sciences.*

Formol as an Antiseptic and Preservative.—Formol is the name by which an aqueous solution of form-aldehyd (formic aldehyd) gas (HCOH), varying in strength from 40 to 45 per cent., is known; it is a colorless fluid having a pungent odor.

According to Berlioz and Trillat, and H. Aronson (Berliner Klin. Woch.), formol possesses considerable antiseptic properties, both in the fluid and vapor form, without exerting any material toxic action on the animal organism. However, as is shown by further experiments on the part of Berlioz, formol has only a weak microbicidal power, and is therefore not suitable for surgical antisepsis. On the other hand, the drug appears to be destined to play a part as a *preservative* of wine, beer, confections, etc., inasmuch as it is believed to be innocuous and the small doses in which it is employed for that object do not affect the taste of the articles to be preserved therewith. According to Jablin-Gonnet, for preserving wine, 1 part of formol to 2,000,000 suffices; for beer, 1:1,000,000; for fruit-jellies, 1:10,000.—*Merck's Bulletin*, February, 1893.

On the Action of Apioline.—Dr. Pelletan (Paris), in his clinical notes on Apioline, states that the drug administered in spherical capsules of 20 centigrammes each has proved in his hands a true stimulating emmenagogue, acting directly on the ovaries and uterus, or the ends of the nerves contained in them, by irritation of the mucous membrane, during its elimination through the utricular glands, and by producing hyperæmia of the ovaries during its circulation through them; the pain in spasmodic or congestive dysmenorrhœa is thereby relieved. It is moreover indicated in atonic amenorrhœa when the uterus and the ovaries are primarily at fault and the inactivity is not due alone to anæmia. In fact, in all cases amenable to internal remedies, where a correct diagnosis of the symptoms had been made and suitable hygiene and treatment observed, he found Apioline relieved the suppression, regulated the catamenia, prevented or removed the accompanying pain and proved to be a most powerful emmenagogue.

Gonorrhœal Rheumatism.—R. Stanziale (Gazz. d. Osp., Feb. 11, 1893) made the following observations on a case of gonorrhœal arthritis. Cultures made from the exudation drawn from the joint, with all precautions as to the asepticity of the instruments, showed no sign of growth. The effusion was purely sero-fibrinous, and not at all puriform. The ordinary staining agents, like the culture media, failed to show any bacterial elements either in it or in the blood drawn from the neighborhood of the affected joint. Further, inoculations with the exudation also gave negative results both in animals and in the human subject. The latter fact was ascertained by introducing some of the exudation deep into the urethra, and allowing it to remain there for several hours. The report states that no inconvenience whatever resulted. Stanziale therefore agrees with the majority of observers in asserting the absence of specific toxines from the effusion of gonorrhœal rheumatism.

To Deodorize Iodoform, Creasote, and Guaiacol.—The odor of iodoform, creasote, or guaiacol upon the hands can be overcome by washing with linseed meal. Articles having an odor of iodoform may be washed in tar-water to which oil of wintergreen has been added. The taste of pills of creasote can be disguised by means of a little powdered coffee. The odor of iodoform or guaiacol in rooms can be dissipated by burning coffee.—*Deutsche Medizinal Zeitung* (*Medical News*, March 18, 1893).

Syrup Iron Chloride (*Parke, Davis & Co., Detroit*).—Each fluidounce of this preparation contains 40 drops of the United States tincture of chloride of iron. The presence of free acid is unnecessary for perfect solution of the basic salts of iron, and the therapeutic efficacy of the tincture is not diminished by the removal of the excess of acid, which is commonly believed to have a destructive action on the teeth.—*Bristol Medico-Chirurgical Journal*, March, 1893.

Soothing Syrup without Opium.—

℞ Oil anise, ♏ xxv.
Alcohol, ℥ ij.
Fluid ext. valerian, ℥ j.
Oil peppermint, ♏ xv.
Tinct. camphor, ʒ ij.
Fluid ext. liquorice, ℥ j.

M. Sig.: Shake the bottle; take ¼ or ½ teaspoonful in water; repeat as needed.

—*Cincinnati Lancet-Clinic.*

Camphoid, a Substitute for Collodion.—

℞ Camphor, } ää 20 parts.
Alcohol, }
Pyroxylin, 1 part.—M.

℞ Camphor, } ää 20 parts.
Alcohol, absolute, }
Pyroxylin, 1 part.
Iodoform, 4 parts.—M.

—*Pharm. Ztg.*, 1892, No. 31 (*Medical News*).

Medical Progress.

THE TRUE CAUSE OF CANCER.—In spite of our advances in pathology, there are certain problems regarding common affections which are still very little nearer actual solution than they were ten or twenty years ago. Theories as to ætiology come and go in rapid succession, each one claiming to hold the bit of exact knowledge necessary to complete the chain of conclusive reasoning. The greatly enhanced prevalence of malignant affections, and the very loathsomeness of many of them, direct the attention of both profession and laity to this class of diseases.

An interesting paper upon this topic as related to cancer was recently read by O'Sullivan before the Medical Union of Victoria (Australian Medical Journal., Dec. 15, 1892). He discusses at first the prevalence of the malady. The health reports of his country show that of every twenty-one men and every eight women who live to be 35 years old, one of each class will die of cancer. With women, the uterus and breast are the selective regions of cancerous invasion, while men are more apt to suffer in the tongue, œsophagus, and stomach; but when we investigate parts not influenced by marked differences of function or the mode of life characterizing the sexes—what may be termed neutral ground, such as the internal viscera, lower intestinal area, and lymph nodes—there seems to be an equal liability with both sexes.

O'Sullivan asks the question: Why are malignant uterine and breast cases so frequent? Richness in cell elements might be accepted as a causative factor (for abnormal cell proliferation is the most obvious feature in cancerous masses), but the liver and lymph nodes, though sharing in this wealth of cell life, do not show any special tendency to cancer.

Now, there are certain conditions found in the uterus, or at least that portion of it whence malignant growths almost always spring—its lining membrane – which at once suggest a special liability to cancerous diseases. Here we find the cell elements undergoing frequent modifications and changes in their growth and arrangement, and here the nervous system exercises the most absolute control over those histological variations (as demonstrated in the menstrual process). As soon as the malignant process is initiated, the normal healthy ratio of cell elements to well formed tissue is lost; the little specks of protoplasm or cells which form the bulk of every malignant tumor appear to throw off all allegiance to the central nervous authority, and seem no longer subject to the laws which regulate the healthy organism; they proliferate luxuriantly, are nourished, and grow—as all parasites do—at the expense of the host which affords them shelter.

In by far the majority of instances of malignant disease of the uterus and breast, the variety is carcinoma, of which of course the glandular lining is the parent tissue. What antecedent history do we generally get? In a comparatively small number of instances we find cancerous formations initiated by direct mechanical injury or irritation, the net result of which must be brought about by lowering the vitality of the part, and destroying, more or less, the physiological balance of its tissues. Cancerous growths of the connective-tissue variety (true sarcomata) appear generally to follow some sudden rupture or other injury of connective-tissue elements, by a blow or strain. The injury is often of a trivial and passing character, does not give rise to the slightest suspicion of serious consequence, and is soon forgotten.

In squamous epithelioma of mucous surfaces, there must, almost of necessity, be a superficial lesion—a crack, cut, or abrasion as a starting-point. Then, "the door for the initiation of the cancerous process is thrown widely open" (Snow), and continued irritation of the adjoining tract does the rest. The mechanism of production of a small percentage of breast carcinoma may be explained in this way, and doubtless we may ascribe a few examples of the uterine disorder to a similar agency.

Bland Sutton describes cancer as "adherent glandular formations, which grow aimlessly and have no function to keep them in subjection." Naturally, therefore, do we notice that each neoplasm resembles in structure the glands in its immediate neighborhood.

Nevertheless, many cases afford no mechanical explanation, and in these probably a neurotic factor obtains. Hence women are affected more frequently than men. Under the neurotic heading may be classed mental distress, exhausting work, prolonged illness. Additional elements of harm are seen in constipation, tight lacing, excessive use of nervines, etc. All these agencies act by leading up to defective innervation and lowered nutrition.

Of course numberless attempts have been made to find a microbic origin for cancer. The work along this line is most promising, and another decade may witness the great discovery. Already Hanau, Weber, and

Eiselberg are transferring successfully carcinoma and sarcoma from one animal to another.

Professor Kubasoff, of Moscow, after a long period of bacteriological research, arrives at the conclusion that cancerous growths are caused by a special pathogenic, rod-shaped microbe which, when inoculated under the skin of animals, gives rise to cancerous degeneration, commencing in the nearest lymphatic glands, and subsequently spreading to the internal organs. Albarrau, Darier, Thoma, and Wickham have found an organism in cancer which they describe as belonging to the protozoa. Delepine, Duplay, and Cazine demonstrate the presence of psorospermiæ and coccidiæ in epithelial tumors and cancers. Sudakewitch, who has obtained specially good results in his experimentations, demonstrates most accurately certain micro-organisms which Metchnikoff asserts are nothing else than psorospermiæ and coccidiæ. W. Russel describes, before the Pathological Society of London, the existence of protoplasmic bodies, which he terms the characteristic organisms of cancer, and which are now known as fuchsine bodies. Woodhead, in his Practical Pathology just published, says: "There can be no doubt whatever that the organisms to which Dr. Russel draws special attention are similar to those described by other observers as psorosperms." Whether these parasitic bodies originate the malignant process and are the cause of cancerous infection, or whether they result therefrom, has not been finally decided; but when we consider that all recent biological research has proved their occurrence in the epithelial cells, and that they undoubtedly give rise to cell proliferation, as proved in the lower animals, we must at least admit the strong probability of their causal agency in the production of cancers.

O'Sullivan concludes:

1. That whatever produces chronic ill-health depresses the nervous system, and is clinically found to constitute an influence strongly predisposing to cancerous developments generally.

2. That local agencies exert only a minor influence in their direct genesis.

3. That while rapidly increasing in prevalence in civilized nations, they are almost absent amongst the savage.

4. That malignant disease is in very many instances primarily local and due to disordered functions, as proved by the fact (known to all surgeons) that the disease when promptly removed may never recur.

5. That benign ulcerations may become malignant, when it may be assumed the phagocytic action of the leucocytes has become subjugated by the micro-organism.

6. That disease of any kind, whether malignant or inflammatory, never occurs in an individual whose functions and nervous system are in perfect health, and who has, as a consequence, perfect local and general resistance to all pathogenic micro-organisms —in whom phagocytosis is healthily and perfectly accomplished. (And here I may be allowed to say that Mr. Jonathan Hutchinson insisted that cancer is simply a modification of what occurs in chronic inflammation.)

7. That when, from continued irritation, depressing influences, or advancing age, the physiological character and vitality of the animal cells become lowered, cancer finds all the conditions necessary for its growth.

8. That, in a word, cancerous disease is but one of the many proofs of over-pressure on the nervous system, which the artificial and vicious conditions of modern civilization involve.—*The Epitome of Medicine*, February, 1893.

An Untoward Effect of Piperazin.*—Soon after the appearance of the brochure on piperazin, in which Prof. Dr. Ebstein of Göttingen reported on the action of this new medicament, I had occasion to prescribe this agent to patients consulting me on account of uric acid concretions, in daily doses of one gramme, dissolved in water charged with carbonic acid—not, however obtaining a specially favorable result in any case.

During the summer of 1892, while practicing amongst the visitors at the springs here, I took advantage of the opportunity to administer piperazin to a number of patients who had been using successfully the waters of the "König" and "Helenenquelle" (known to possess the power of dissolving uric acid), but who were not yet perfectly well. As usual, in the very first days of the cure, they had evacuated orange-colored kernels of uric acid, as large as a pin-head and not readily crushed, having felt the same glide out of the kidney through the ureter and urethra. They still experienced, however, a mild sensation of sticking or pressing in the renal region on bending over or when struck upon the loins.

These patients in no case evacuated, on taking one gramme of piperazin daily without mineral water, more concretions than when employing the mineral water without piperazin. Their urine was just as acid as before,

* Translated for Medical Age from Therap. Monatshefte.

and certainly darker in color than after the use of the mineral water. The microscope, magnifying 600-fold, revealed the same constituents: little clumps of uric acid, brown and yellow, older and more recent forms, or rhomboids or dumb-bells, besides fragments of pavement epithelium of the renal pelvis, also normal and scanty bits of pus.

The action of the piperazin was certainly not remarkable.

I then on the same day prescribed to each of two visitors—a young man from Westphalia, and a lady from Thuringia—one gramme of this agent dissolved in common drinking-water every second day. The Westphalian suffered from uric acid concretions in both kidneys, with frequent colics which confined him each time to his bed for several days, involving vomiting and severe pains in the back. He had had two such attacks during the fourteen days of his sojourn here, but they had been milder; his condition was much better than before. Repeatedly investigating his urine, which at first was very acid and yellow, subsequently clear and less acid, I found under the microscope bright and dark bits of uric acid, pavement epithelium, but no trace of albumin on boiling or on adding nitric or picric acid.

On the afternoon of the day, early in which this patient had taken the second gramme of piperazin, I examined the urine, and found by using picric acid an *abundance of albumin* with the same proportion of uric acid and epithelium. *This was caused by the piperazin;* I make the statement in view of the uniformity in the patient's mode of life and the prevalence of the same beautiful warm weather. The condition disappeared presently, and did not recur during the subsequent use of our mineral waters.

The young lady, daughter of a physician who had treated her with scrupulous care on account of a nephritis of fifteen months' standing, on arriving here showed traces of albumin (according to Esbach ⅓ per mille, as estimated each time after the mixture was permitted to stand twenty-four hours) in tolerably clear, slightly acid, yellowish urine; under the microscope the latter revealed individual bits of mucus, but never any hyaline casts. There was a general improvement, and the œdema pedum disappeared on the use of the waters of the König and Helene springs and on bathing in the water of the former at a temperature of 100° F. The uric acid still present in the urine, and recognizable in the form of little clumps under the microscope, which I regarded as the primary cause of the continuance of the nephritis, I hoped to cure with piperazin. After the second gramme of this agent examined the urine quite as carefully as had every second day before. But fancy m alarm, and that of the lady and her husband when I added picric acid to the specimen o urine. *The urine again contained albumin* and the general condition of the patient be came worse soon after the administration o the second powder.

In view of the patient's scrupulously uni form mode of life, and the continued preva lence of the beautiful warm weather o August, 1892, *the recurrence of an already vanishing nephritis is to be imputed to the piperazin alone.*

Piperazin, accordingly, is no harmless agent, and is to be employed with caution where the kidneys are not intact!—Dr Körig, of Wildungen.

THE CARE AND TREATMENT OF DIPSOMANIA.—At a recent meeting of the American Association for the Study and Cure of Inebriety, Dr. Edward C. Mann, of Brooklyn N. Y., Medical Superintendent of Sunnyside Private Hospital for Diseases of the Nervous System, Alcoholism, and the Opium Habit which is one of the most successful institutions for the treatment of these diseases, read a paper on "Science *vs.* Folly in the Treatment of Disease Caused by the Abuse of Stimulants and Narcotics: A Plea for the Suppression of the Nostrum, Patent Medicine, and Specific in Rational Therapeutics." It should be the aim of the scientific physician, said Dr. Mann, to see that the conditions of life are in the air his patients breathe and the food they eat. He must see to the conditions of primary assimilation – which consists of the changes which proximate principles undergo previous to their conversion into the blood,—and likewise those of secondary assimilation, by which portions of the blood are converted into organic tissue and are again removed from the system by retrograde metamorphosis. The use of stimulants and narcotics operates to the derangement of the conditions of life, by interfering with primary and secondary assimilation. Alcohol produces irritation, and irritation of a part causes an excess of action in that part, producing morbid affections. Irritation perverts nutrition and arrests the vital powers. Dr. Mann recommended the following in the treatment of dipsomania; it acts as a tonic and sedative, and antagonizes the effects of alcohol in the various structures of the body, including degenerative changes in the brain:

℞ Quinia sulph., gr. ij.
Zinc oxide, gr. ij.
Strychnia sulph., gr. $\frac{1}{40}$.
Arsenic, gr $\frac{1}{100}$.
Capsicum, gr. ij.

M. et ft. pil. No. j. Sig.: One pill three times a day.

Together with this pill, Dr. Mann uses in his private hospital for sixteen days the following hypodermatic dosimetry:

℞ Strychnia nitrat., gr. j.
Aquæ dest., ʒ ss.

M. Sig.: Eight minims daily for eight days; 4 minims daily for another eight days.

To quiet the morning nausea of alcoholics, two or three drops of wine of ipecac on the tongue, fasting.

The patient is kept in bed for the first few days, and nourished with milk and meat-juice. Hydrotherapy and electrotherapy are employed. To induce sleep, the following sedative is administered at night for a few days:

℞ Tr. opii deod., Fl. ext. hyoscy., Chloral hydrat., Pot. bromid., āā ʒ j.
Tr. capsici, ʒ ss.
Tr. aconit. rad., ♏ v.
Aqua menth. pip., ad ʒ iv.

M. Sig.: Two tablespoonfuls at bedtime for few days only, freely diluted with water.

If the patient is very much excited and is bordering on delirium tremens, the following is useful for two or three nights:

℞ Hyoscin. hydrobromat., gr. j.
Aquæ dest., ʒ ix.
Spt. vini rect., ʒ j.

M. et ft. hypodermatic solution. Sig.: Dose from 5 to 10 minims *pro re nata*.

The Diet Table in Dr. Mann's hospital consists of milk, eggs, oysters, meats, fish of all kinds, buttermilk, and koumiss, *plus* a minimum amount of the cereals. Vegetables and starchy foods allowed only very sparingly, the idea being to rely on a diet which requires the least vital force and oxygen to digest, assimilate, and appropriate it, and to have ingested into the body such material as will, when brought under the influence of oxidation, yield energy, which is the expression of vital activity, and give the largest working power for the amount of food taken.

By such a plan of treatment, patients are sent out with restored health, the craving for alcohol gone, the lost will-power restored, the shattered nervous system built up, and with a concentration of energy, physical ability, and mental activity obtainable by no other plan of treatment.

Dr. Mann's hospital has been removed to a fine estate in Flatbush, with enlarged facilities and extensive grounds, within 40 minutes' ride by electric car from Brooklyn Bridge.

Prophylaxis and Treatment of Cholera in New York Harbor in 1892.—The prophylaxis of cholera demands attention to certain details; had these been observed, there would not have been any cholera in New York Harbor. The disease can be stamped out on shipboard in five days by competent medical officers, and should be done at sea. Under the direction of the health officer it was done in every case after the steamships came under his jurisdiction. The sick and dead were removed. The immigrants received baths, having been previously rubbed with a bountiful supply of green soap. A sail, suspended by the four corners, the water being constantly renewed, was an excellent, though an improvised, bath-tub. The crew's quarters and steerage were scrubbed and washed with a 1:500 solution of corrosive sublimate. Fumigation with sulphur was carried out. Baggage and clothing were disinfected by sulphur, superheated steam, and, when injury would not be done, by corrosive sublimate solution; soiled clothing was burned in a furnace. Fresh water was supplied, and only used after boiling.

On admission to the island, all were bathed again. The thoroughness of the work done on board the vessels and at Hoffman's Island is shown by the result—the absolute prevention of the entrance of cholera into the United States. The treatment carried out on Swinburne Island was essentially surgical in bearing, especially in the stage of asphyxia. If there was no collapse in the premonitory diarrhœa, the bowels were cleared by 10 grains calomel per mouth every hour until three doses were taken or thorough evacuation secured. Afterwards, ½ grain every two hours. Stimulants as required, preferably brandy, and generally hypodermatically. In stage of asphyxia the stomach and bowels were thoroughly washed out. For the stomach the Fancher tube was used to introduce the 1:1000 solution of hydrochloric acid every two hours. The intestines were washed out with a 2-per-cent. aqueous solution of tannic acid every two hours, half a gallon being used at a temperature of 108.9° F. A rectal tube two feet long was employed, patient upon the back, and gentle massage indicated if difficulty in passage of fluid beyond ileo-cæcal valve. The object was threefold: (1) to warm the body; (2) to precipitate the ptomaines; (3) to wash out intestines. The

bodily temperature rises from one to three degrees after the injection. When pulse was weak and respiration shallow, hypodermoclysis was resorted to. A solution of sodium chloride 3 parts, brandy 10 parts, to 1,000 parts of sterilized water, was employed at a temperature of 104° F. One quart for an adult, injected into flanks about the eighth rib, and repeated every second to fifth hour, according to conditions of case. Eleven quarts have been used in one case. No nourishment while vomiting persisted, but at other times peptonized beef, champagne, and milk with carbonated water—three parts of the former to one of latter. The distressing cramps were avoided by placing patients in a warm atmosphere, in their beds, near steam-radiators, and building a tent over them. During convalescence a simple and nourishing diet was insisted upon; this lasted about fourteen days. It is especially noticeable that opium had no place in treatment, as the experiments of Koch have demonstrated the fact that it favors the development and progress of the disease. The bodies of all persons dying from cholera were cremated.—R. W. Wilcox (*American Journal of Medical Sciences*, January, 1893).

PHENACETIN.—Epidemics come and go under natural laws, and when we see the end of one of them we feel sure that it will not recur for months—perhaps for years. But there seems to be one exception to this law. We call that enigmatic condition known as *la grippe* an "epidemic," yet we have its precursoriæ or its sequelæ at all times, and it seems certain that it has become chronic with us and will remain. However this may be, it has its exacerbations, and these are especially marked at this season. In considering the various modes of treatment as adopted by American practitioners, we note a tendency to the same general ends. The first object is to soothe pain and restlessness and to control the febrile element, whether the latter be free or masked. For this purpose, Delafield (New York County Medical Society) gives phenacetin in 5-grain doses every two hours, stating that "of all the remedies for influenza" he has "found nothing so reliable." DaCosta (College and Clinical Record, January, 1892) gives 3 grains of phenacetin with 1 of quinine every three hours. Hare (Medical Bulletin) has a predilection for nux vomica, giving phenacetin when fever is high. Hughes (Journal American Medical Association, February 27, 1892) writes: "The best medicines for influenza have been phenacetin, quinine, and the salicylates." Shoemaker (Medical Bulletin, February, 1892) says: "The aching pains yield most readily to phenacetin every two hours." Ketcham (Medical News, January 9, 1892) "I have used phenacetin with sodium salicylate, with the happiest results." Herman, Rohe, Cooper, Walson, Curtin, Stanley, Cyrus Edson, Hamaker, and many others, report to the same effect. Some practitioners give the preference to phenacetin and salophen in combination.

THE VALUE OF A NEW COCA BASE, BENZOYL-PSEUDO-TROPEINE (TROPACOCAINE) AS A LOCAL ANÆSTHETIC.—This is a new alkaloid, recently isolated, by Giesel, from the leaves of a "small-leaved coca-plant" of Java, and its chemical constitution and properties thoroughly studied by Liebermann. It can also be prepared synthetically. Actual experiment has proved the drug a powerful local anæsthetic, resembling, but not identical in local action with, cocaine. The writer has instituted a series of careful experiments on its physiological and toxic action on cold and warm-blooded animals. The experimental work was done in the Pharmacological Institute of the University at Berlin. His conclusions are summarized as follows: The most important differences between the action of tropacocaine and cocaine on animals are probably the following:

1. Tropacocaine is less than one-half as toxic as cocaine.

2. The depressing action, both on the cardiac motor ganglia and the heart-muscle, especially the latter, is much greater with cocaine.

3. Local anæsthesia, both of the eyes and skin, is much more quickly complete with tropacocaine, and is possibly of longer duration.

4. Slight hyperæmia is occasionally present but quickly disappears, while with cocaine only ischæmia is seen.

5. Mydriasis is usually absent, but always seems to be less than after cocaine.

6. Solutions of tropacocaine are moderately antiseptic, and retain their strength for at least two or three months.

Tropacocaine has been given a very careful trial in Professor Schweigger's ophthalmic clinic, with the following results: Complete anæsthesia was produced more quickly by it than with cocaine in the same strength solution. No harmful symptoms of any kind were seen. For rapid operations it seemed preferable to cocaine. Painless tenotomy has been performed in less than half a minute after applying a 3-per-cent. solution.—Arthur P. Chadbourne, M.D., Boston.

The Medical Age.

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Original Articles.

A UNIQUE CASE OF PUERPERAL SEPSIS: WITH COMMENTS.*

BY SCHUYLER C. GRAVES, M.D.†

The case which I present here to-night, in some respects most remarkable and unique—involving, as it does, the three fields of obstetrics, medicine, and surgery—affords such valuable instruction for use in every-day practice, that I deem it of sufficient importance to discuss before you.

My notes furnish the following outline:

"Mrs. F. H. B——, age 26; primipara; confined Feb. 14, 1893. Labor twelve hours in duration. Presentation and position normal. Progress slow; forceps were applied, after ten hours of labor, and head brought to perineum. Forceps then removed, and perineum supported as much as possible in order to minimize any rupture. Tear moderate, and was immediately stitched with aseptic silkworm-gut. Sex of baby, female; weight, 9 lbs. Everything as aseptic as possible.

Feb. 22d (eighth day): Chill to-day, followed by fever of 103° F. and pulse of 120. Cause, mastitis of left side. The left breast has given trouble from the first. Child would not nurse it until compelled to by hunger.

Feb. 23d: Slight chill this morning. Profuse perspiration. Temperature, 102.7°; pulse, 112. Under and inner surface of left breast presents a blush, inflammatory in character, same as yesterday. Quinine ordered, and cloths dipped in a lead-and-opium wash applied under oiled silk. Phytolacca (fl. ext.) exhibited internally.

Feb. 24th: Temperature high all day (104°–105°), without chills; pulse accordingly. Between 10 o'clock and midnight, temperature rose to 105.5°; pulse to 130. Perineal sutures removed, and uterus irrigated with a warm 1:5000 bichloride solution, although lochial discharge was not offensive. The irrigation was done because the mastitis could not account for the symptoms, and it was suspected that a focus of infection might be hidden away within the cavity of the uterus; but the fluid returned as sweet and limpid as it entered. No pain or tenderness anywhere except in left breast. No tympanites.

Feb. 25th: Shortly after midnight a violent chill occurred. Rectal temperature registered 107.5°, and in a half-hour more 108.3°; pulse, 200. Collapse imminent. Patient in frightful condition, actively maniacal. Muscles twitching universally.

Counsel called. Brand's system of cold plunge-baths immediately instituted, five in all being given. Patient's water drawn. Condition at 3 P.M. (25th) very hopeful. Food taken and relished.

Feb. 26th: Since last bath (5 P.M., 25th), temperature has remained in neighborhood of 101°, at one time dropping to 99°. Condition excellent. An occasional hypodermatic of strychnia has been given, also some small doses of digitalis and belladonna. Bowels were moved freely this morning by Seidlitz powders, assisted by a turpentine enema. Patient passes water herself. Given milk and buttermilk, with carbonated seltzer, every three hours. Prognosis good.

Feb. 28th: Condition continues excellent. Recovery expected. Small lymph-gland below and posterior to right ear considerably inflamed. May suppurate. Poultices applied. Profuse salivation noticed.

March 1st: Small lymph-gland proved to be posterior lobe of parotid salivary gland, which became generally inflamed this morning. Salivation explained. Condition evidently septic parotitis. Prognosis again doubtful. No appetite, although food is taken

*A paper read before the Wayne County Medical Society, Detroit, Mich., April 13, 1893.

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without repugnance. Pulse good at 100; temperature ranging from 102° to 103°. All over body, especially in small of back and between shoulders, there has appeared a pustular eruption, shotty to the touch, but not umbilicated. Pustules far apart except in lumbar and interscapular spaces, where they exist in clusters. They are evidently a manifestation of sepsis. Four leeches applied over parotid.

March 2d: Hypodermatic of morphia ($\frac{1}{4}$ grain) brought sleep last night. Temperature this morning, 102.7°; pulse something over 100. Parotid somewhat smaller and less painful. Six more leeches applied, and patient put upon mercuric bichloride ($\frac{1}{32}$ grain three times daily).

March 6th: Parotitis proved to be suppurative, an abscess resulting. With assistance of Dr. Maclean, of Detroit, the gland was freely incised, giving vent to a teaspoonful of pus, deeply situated. Wound irrigated with $HgCl_2$ solution (1:2000), and a moist antiseptic dressing applied. Incision made back of the ear.

March 9th: Temperature ranges from 101° in the morning to 104.2° in the afternoon. Further trouble in gland evident. General condition of patient, however, is excellent. Good appetite, and strength returning.

March 11th: Temperature, morning, 100.2°; condition much improved; temperature, afternoon, 102.2°.

March 12th: Temperature, morning, 99.6°; afternoon, 101.8°.

March 16th: Temperature all day, 98.6°."

About this time (March 16th) the patient complained of severe pain extending from left groin, through thigh and leg, into foot. Could not rest weight of body upon that limb. Pain very severe in calf of leg. This complication, so far as pain was concerned, passed away in about a week, being followed by marked œdema of foot, ankle, and limb as far as, but not beyond, the knee. After a week or so of snug flannel bandaging, the œdema practically disappeared, and the patient was shortly afterwards walking about the house, although a slightly œdematous condition of the leg, between knee and ankle, persisted and even still persists.

Now, gentlemen, let us take up the points of interest connected with this case. It wil be seen that they readily fall into tw groups:

1. Those of pathologic import.
2. Those of therapeutic import.

The pathologic points of interest are:

1. The uncommonly high temperature.
2. The extremely rapid and feeble pulse.
3. The maniacal delirium.
4. The violent, clonic spasms of the mus cles, particularly the facial and upper an lower flexors.
5. The peculiar pustular eruption.
6. The marked ptyalism.
7. The septic parotitis.
8. The pain and œdema in connection wit the left lower extremity.

The therapeutic points of interest are:

1. The Brand treatment (hydrotherapy).
2. The profuse diaphoresis.
3. The employment of the knife.
4. The exhibition of mercuric bichloride.
5. The administration of food and stimu lants.

It is rare for a physician to note a therma registration in the human body of 108.3° I I am aware of the fact that after certai spinal injuries, as also in sunstrokes, ofte the temperature runs high, occasionall reaching the 109° and 110° point, and tha hysterical temperatures have been recorde as high as 110° and 115°. In an editorial i the columns of The Medical World for th month (April, 1893), there is given a sched ule of hyperpyrexias from which patient have recovered, in which the temperatur ran from 107° F. to 133.6° F., the lowe grades being associated with such disease as "pneumonia, rheumatism, sunstrok measles, sewer-gas poisoning, and laparo omy." The diseases associated with th higher grades are not given except in a singl instance, where a case of "phthisis" showe a thermal rise to 128° F. The editorial goe on to state that "still more remarkabl comes the report of Dr. Heler Jones, in th Memphis Medical Journal, regarding a cas of recovery where the temperature ran, times, up to 157° F., resulting in burstin the thermometer. Such a high temperatur seems almost if not quite incredible; but is vouched for by some twelve physician who saw the case."

The writer's room-mate, when a student at the university, now practicing at Omaha, Neb., saw the woman who, a year or so ago, first interested and then astounded the physicians there by breaking all *their* clinical thermometers, in consequence of the height to which her manufactured febrility rose when the occasion demanded. He stated to me as a fact beyond peradventure, that the temperature of this woman would at times register 200° F.; but her pyrexia was not inflammatory nor septic; and so I repeat that, considering thermal registrations as we find them in truly genuine pathological conditions, a temperature of 108.3° is rare in the practice of medicine, and recovery from the disease acting as its cause is rarer still.

One would expect a rapid pulse with such a temperature; but a pulse of 50 to the quarter minute—200 per minute—adds very much to the hopelessness of a case, and, I venture to state, is not often duplicated even in patients who fail to emerge from "the valley of the shadow."

The delirium might be expected, and yet it was peculiar. It seemed as though the poor brain was literally on fire. Jactitation was marked. The pronounced twitching of the muscles showed the profound impression which the poison, with or without its offspring, the awful heat, made upon the nerve centres.

The pustular eruption, with the shotty feel of variola, was a manifestation uncommon, though not, perhaps, very rare in septic cases.

My earnest attention was attracted by the salivation, which was a puzzle to me until I saw that the parotid gland was the part involved, and not a lymph gland. The distinction, I can assure you, was not at first an easy one. Of course, incipient inflammation of a salivary gland would naturally be associated with an increased outflow of its product; but I had, more than once, witnessed non-suppurative inflammation of the parotid, especially during a typhoid, not associated with salivation, although I knew that in mumps it was the rule, with frequent exceptions. I continued, however, in error until the swelling, which at first was a small, round, circumscribed lump behind the ear, began to extend through the sub-auricular and into the anterior auricular regions, thus disclosing its identity. Just why the right parotid should have been selected as a suitable field for the continued operation of the toxine, it is, of course, impossible to know. It is one more of the unknowable things connected with our art.

The inflammation of this gland put a serious aspect upon the case at once, and was the cause of much anxiety for a time; but, fortunately, with the able assistance of your distinguished fellow-citizen, Dr. Maclean, this threatening complication was successfully terminated.

I am unable to state the immediate cause of the pain and œdema associated with the left lower extremity. There seemed to be no involvement of the glandular structures in the groin, no evidence of phlebitis, and no albuminuria. Nothing in particular was done by way of treatment other than to keep the œdematous parts firmly bandaged and the limb elevated, the complication passing almost entirely away in a fortnight.

Therapeutically speaking, I can find no words sufficiently strong to express the feeling I experience when I think that through the Brand hydrotherapy this little wife was veritably lifted out of the grave and restored to the embrace of her family. What act, gentlemen, can be more sublime than this, anywhere, any time, in what division of our art soever it may obtain?

Although the little lady's life was subsequently threatened by the persistence in her system of poison, as evidenced by the development of the parotid abscess, the fact nevertheless remains that, during the continuance of the hyperpyrexia, death, I verily believe, would soon have put an end to the scene had it not been for the labors of that great German therapeutist, Brand.

The amazing influence for good which the baths had, as noted in the following table, was associated, it will be observed, with an agency which, while being astonishingly potent, was, at the same time, both simple and gentle in its effect upon the patient. I verily believe that the use of such depressing drugs as the coal-tar group would have turned the balance in favor of death.

I here present an epitomized chart of the baths, showing results:

BRAND CHART (*showing use of baths on Feb. 25th, the eleventh day of illness*).

Hour of day A.M.	Hour of day P.M.	Temp. °F. Vaginal.	Pulse.	Resp.	Remarks.
2	.....	108.3°	200	40	(1) Bath 20 min., 90° reduced to 75°. Very delirious.
2:30	.....	102.5°	160	12	Still very delirious. Held under the water.
4:30	.....	103.7°	160	12	(2) Bath 15 min., 75°. Less delirious.
5	.....	101.9°	136	12	Less delirious. Muscular twitching stopped.
7	.....	102.7°	140	12	(3) Bath 17 min., 75°. Mind clear
7:25	.....	103°	128	14	Mind clear. Milk given and relished. Water drawn.
9	.....	102.5°	130	14	Heart's action much improved. Wants her bath.
10	.....	103.3°	138	14	(4) Bath 15 min., 70°. Very quiet.
10:30	.....	102.1°	132	18	Cannot retain brandy or whiskey; but retains wine nicely.
.....	2	103°	120	20	Retains milk. Wants her bath.
.....	4	103.4°	130	20	(5) Bath 15 min., 70°. Feels refreshed.
.....	5	101.5°	110	20	Passed water herself. Sleeping nicely.
.....	6	99°	110	20	Taking beef tea and wine. Feels good.

The baths not only reduced the fever; they also steadied and stimulated the heart. Under their benign influence the pulse became slower and fuller, the delirium passed away, the skin grew cool and moist, the mastitis disappeared, the kidneys performed their function more actively; and refreshing sleep, induced thereby, brought in its train all the advantages which healthful slumber can vouchsafe.

In fact, although this system of treatment could not destroy the pathologic cause of the phenomena present, it nevertheless, by supporting the vital centres and at the same time stimulating the emunctories, both sustained the tone of the tissues and initiated and maintained a more or less rapid elimination of the ptomaines causing the disturbance.

Can anyone in possession of his senses believe, after hearing this history, that the physician is right who asserts that in hyperpyrexias "the severe symptoms are not the effects of the high temperature, but of the infection causing the fever?"*

No cut-and-dried rule can apply to these cases.

I have seen a patient with a temperature of 107°, due to puerperal sepsis, who did not know that she had much fever, and who la quietly in her bed, calm, undisturbed, an rational; and I have also seen a patient wit a temperature of 109°, caused by malaria poisoning, who could scarcely be kept in be because of her maniacal tossings about Both of these cases died—the first fror septic infection; and the second, at least i part, from the exhaustion of the centre brought about by the hyperpyrexia.

High temperatures operate differently upo different temperaments; and I most decidedl take issue with the man who declares that fever of 107° F., or more, does not augmen the element of danger in *any* case.

No amount of negative testimony can ofl set the positive testimony which I presen here to-night. Look upon the picture of thi case prior to the exhibition of hydrotherapy and then upon that subsequent to it, and be lieve, if you can, that a high range of tem perature, over and above its cause, may no be a most dangerous menace to life.

Another interesting therapeutic feature o our case was the profuse perspiration.

One of the consultants looked upon thi phenomenon as an evidence of exhaustion and recommended atropia; but it was th writer's opinion that nature, by this mean was making an effort to eliminate the excitin cause, and accordingly no medicine wa given, but alcoholic stimulation instead wa employed as deemed necessary.

Referring to the parotitis, we can say tha when an inflamed gland suppurates, it ough of course, to be incised; but the question i this case was: Is pus present or not? A slight blush, a faint evidence of œdema, a elevation of temperature, were all the symp toms we had; no chill or chilliness, no sweat ing (at this time), no fluctuation. Pus wa thought to be present, however, and th skillful sight and tactus of Dr. Maclean cor roborated our opinion.

The principal, and almost the only, med cine which the patient took during her illnes was the bichloride of mercury. In regard t my opinion as to the efficacy of this drug i septic diseases, I quote from a former pape of mine, reporting a case of septicæmia whic recovered after the exhibition of $HgCl_2$, an read before the Grand Rapids Academy o Medicine last year, as follows:

* The Medical World, April, 1893.

"It is my firm belief that the bichloride was instrumental in the saving of this patient's life; and my theory as to its action, in that particular, is as follows: The amount of mercury given in such cases, although not by any means large enough to immediately destroy the microbes which exist and multiply in the blood, is sufficient to at least partially sterilize that blood and thus render it a less fit habitat for micro-organic life. The succeeding generations of bacteria, thus, would possess and oppose less resistance to antoward influences, and this lack of individual and racial vitality would become an inheritance. Therefore, provided the untoward influences (the bichloride in this instance) were maintained, the species, according to the inflexible law of natural selection, would deteriorate and, sooner or later, become extinct. If this were true, we would expect a more or less gradual subsidence of the symptoms; and that such subsidence did occur in the case under discussion, the accompanying history amply shows."

This, of course, when the microbes and not their ptomaines are circulating in the blood current.

It is needless to add that particular attention was paid to the maintaining of the strength and nutrition of this patient. Alcohol in various forms, and good, nourishing, easily assimilated food, were assiduously administered, and with excellent results.

In conclusion, I raise the query: What was the cause of this disease? The only ætiological crumb I can obtain is the history, in the patient, of what was termed a boil on one of the labia majora a year and a half ago. This occurred while the patient was South on a visit, and was never seen by the writer. The boil (?) was poulticed and incised by a physician in the locality, pus being present, and since then has given no further trouble.

The boil (?) might have been a Duverney's abscess, and in such case it would not be at all impossible—indeed, it would be rather probable—that a modicum of pus lingered during all the intervening months, in the crypts of the gland, awaiting the presence of favorable conditions for the active growth of the strepto- or staphylo-coccus. That a genital tract, immediately or soon after confinement, offers a suitable soil for such development, we all know to be a fact beyond question.

This, gentlemen, is the case, and I trust that it will elicit a full discussion among you, for the more we know about such matters the more lives will we be enabled to save in the practice of our profession.

Detroit, Mich.

THE ART OF FORMULATING—ON THE HYPODERMATIC METHOD.

BY DR. DUJARDIN-BEAUMETZ.

Luton, of Rheims, was one of the first to practice what he calls Hypodermatic Transfusion, the technique of which is described in an article which appeared in 1889 in the Archives Générales de Médecine. The serum which he uses has the following formula:

	Parts.
Crystallized phosphate of soda	5
Sulphate of soda	10
Distilled water	100

Boil, sterilize, and filter.

I may remind you, *apropos* of this hypodermatic transfusion, that this method has been taken up by Cantani in the treatment of cholera, under the name of Dermoclysis. It consists in injecting into the cellular tissue large quantities of water containing chloride of sodium in solution. The principle is the same as that of the intravenous injections of Hayem. Hayem's formula is as follows:

	Parts.
Chloride of sodium	5
Sulphate of soda	10
Distilled water	1000

Chéron has proposed another formula, which resembles the foregoing; it contains in addition a little phenic acid:

	Parts.
Sulphate of soda	8
Phosphate of soda	4
Chloride of sodium	2
Carbolic acid (crystals)	1
Sterilized water	100

M.

Huchard has modified this formula as follows:

	Parts.
Phosphate of soda	10
Chloride of sodium	5
Sulphate of soda	2.50
Carbolic acid (crystallized)	1
Sterilized water	100

Of this solution, from 5 to 10 grammes (ʒ j–ijss) are injected under the skin. Along with these injections of artificial serum, I must mention those that have glycerin for basis.

Hallipre and Tariel have maintained that solutions of glycerin, when injected, have the same effect as Brown-Séquard's testicular liquid, and they have proposed the following formula:

	Parts.
Neutral glycerin	10
Boiled water	30

They inject twice a week 4 grammes (ʒ j) of this liquid diluted with half as much boiled water.

Under the name of Vitaline, much use is made in Russia of a preparation which is simply a solution of boric acid in glycerin. According to an analysis made in the Municipal Laboratory, the composition of vitaline is as follows:

	Parts.
Borax	38
Pure glycerin (density 1.26)	42
Water	40

Russian physicians give internally 30 drops three times a day of this solution, or make a solution of 2 to 10 per cent. of this vitaline in sterilized water and practice hypodermatic injections of one cubic centimeter two or three times a day. The same solution is used in vaginal or urethral injections.

METHOD OF OPERATING.

The point where the puncture should be made.—Except in cases where you desire to obtain a local action (as in injections for local anæsthesia), you will choose certain points which are more favorable than others for hypodermatic injections—where, for instance, there are few important blood-vessels or nerves that will be likely to give trouble, where the cellular tissue is more loose, and the irritant action is less likely to be felt.

It is, in fact, demonstrated to-day that in giving hypodermatic injections for their general effects, and in particular for an analgesic effect, it is not necessary to make the injection near the painful point, and an injection of morphine for a facial neuralgia will act as well if made in the hip as if made in the cheek of the patient.

Among the places of injection, there is one that Smirnoff has indicated, and which eve permits the injection of irritant substance viz., the retro-trochanterian furrow. At thi point the cellular tissue is loose, there are n important vessels, and when the individua is lying down, whether on the side or back no pressure is exerted on the part injected.

Then we have the cutaneous surface of th loins and back, that of the abdominal walls and the inner part of the thighs. Thes regions are often selected by patients wh practice the injections on themselves, as i leaves the arms free. Physicians are ap to select the arm, and especially the fore arm.

But when the liquid to be injected is c large quantity—*e. g.*, the creasote injection made according to the formula of Gimber or Burlureaux—there are points which ar particularly indicated. Gimbert practice these injections in the dorsal region, belo the point of the shoulder-blade. Burlureau who injects large quantities of liquid, an with great slowness (the process sometime demanding several hours), chooses the thigh and loins. Picot advises the supra-spinou fossa, which presents the great advantage tha when lying on the back the patient make no pressure on the place of injection.

The introduction of the needle.—As to th method of introducing the needle, there ar two ways: in the first, you employ a sho needle, and thrust it in perpendicularly t the surface, having taken care first to gathe up the tissues in the form of a ball and mak the part tense; the needle is then thrust i up to the guard. This method is applicabl to all the fleshy parts, and particularly to th hips. The other method requires a longe needle. You pinch up a fold of skin, an introduce the needle parallel to the latter s that it enters the cellular tissue between th two fingers of the hand that makes the fol When once the needle is introduced, yo cease tension of the part and inject th liquid. By this method you can make inje tions in points where the skin is very thi These injections are more superficial tha the former.

As a general rule, the more irritant the i jection-liquid, the deeper it ought to be i troduced; and such injections as the me curial solutions used in syphilis should b

made in fleshy parts, like Smirnoff's point, where they can be made most deeply.

The needle should be introduced with one thrust, and generally when attached to the syringe, as this gives to the hand more certainty and firmness. I hardly need say that the instrument should be thoroughly aseptic, whether by previous cleansing or by dry-heat sterilization. As for the needle, it should first be passed through the flame, and the point should be sharp.

Before making an injection, the skin of the part should first be scrubbed with an antiseptic solution (sublimate or carbolic acid).

When the liquid has penetrated the cellular tissue, the needle is rapidly withdrawn, and the liquid may be spread under the skin by pressure of the fingers, which will both diffuse its local action (useful when cocaine is employed) and promote its more rapid absorption.

Now, before taking up for consideration the advantages and disadvantages of the hypodermatic method, I have something to add respecting the *anatomy and physiological pathology* of the method.

When you inject very small quantities of liquid, of non-irritant nature, and the active substance which it contains is rapidly absorbed, the hypodermatic injection produces very few disorders; there is a slight rising of the derm, which disappears rapidly without leaving any induration. When, on the contrary, the liquid is irritant and contains particles that do not dissolve, there are produced at the point of puncture inflammatory phenomena manifesting themselves in redness, swelling, induration, and sometimes in suppuration. Though the suppuration does not always supervene, there often remains at the seat of puncture a persistent induration. This induration is the rule in cases of mercurial injections of insoluble salts; it often follows the injections which morphinomaniacs give themselves, and I have seen the skin of the arms and legs in such persons covered with lumps as large as a small nut.

When large quantities are injected, there are often lacerations and hæmorrhages in the cellular tissue. These lacerations are the more likely to take place if the injections are made forcibly and rapidly; hence the rule, to take time and to push the piston-rod of the syringe slowly and gently.

The injected liquid, according to its composition, sometimes rapidly disappears, absorbed by the lymphatic and capillary network; sometimes it sojourns a variable time in the tissues. Where the insoluble mercurial preparations have been used in this way, the presence of mercury has been detected at the site of puncture six months after the injection.

Much depends on the vehicle, as to whether the liquid shall sojourn a longer or shorter time in the tissues. Thus, liquid vaselin may long remain under the skin without being absorbed; the vegetable or animal oils, on the contrary, undergo in the tissues a real digestion which renders them absorbable, provided the quantity of oil be not too large.

Experiments made in the therapeutic laboratory of Cochin Hospital by my pupil, De Touvenaint, have shown that when we exceed certain limits the oil remains in the tissues without being absorbed, and even penetrates the venous network in the shape of liquid droplets, constituting veritable venous emboli, which entail the death of the animal.

The indurations which follow these punctures result from many circumstances: the instrument may not have been aseptically clean; the fluid may have been too iritating, or spoiled—in the latter case (and this is especially liable to ensue when organic liquids are employed) the septic products which develop in the injecting fluid may cause not only local, but general, symptoms.

The point where the injection is made has also its part in the local accidents which may follow the hypodermatic puncture: neuritis, for instance, has been caused by injections of ether in the vicinity of nerve trunks; hæmorrhages have been produced when the point of the instrument has penetrated a vein; and the injection, when thrown directly into a vein, has also more than once produced phenomena of poisoning, of greater or less gravity.

I hardly need tell you that in diabetics and persons whose nutrition is wretched, the punctures may provoke suppuration and even gangrene.

In morphinomaniacs it often happens that, at the end of a certain time, despite all the precautions of antisepsis, these persons can hardly make an injection without this being followed by an abscess; and they are liable to suppurations elsewhere than at the site of the punctures. The presence of these multiple cutaneous abscesses is a sign of morphinomania, and their very existence has in many cases enabled me to affirm that the patient was making an abuse of morphine, despite his affirmations to the contrary.

ADVANTAGES AND DISADVANTAGES OF THE HYPODERMATIC MEDICATION.

The hypodermatic method may be considered as one of the greatest advances made in therapeutics during the last thirty years.

In permitting medicaments to penetrate the economy without passing through the liver, which destroys them or modifies them in part, this method has given to the administration of medicaments a rapidity and an activity exceeding that of any other method. It has, moreover, given to the study of medicaments a certainty which was before wanting. How often have we found in clinical practice that the medicaments prescribed have not been taken by the patients! Where the medicine is introduced hypodermatically, there is no chance for deception.

Therefore, whenever we can isolate the active principle of a medicament, and this principle is soluble, there is an advantage in using the hypodermatic method. It has enabled us, moreover, by avoiding the introduction of the medicine by the stomach and intestine, to keep clear of vomiting, diarrhœa, etc. It is almost needless to say that medicaments tributary to this mode of administration are comparatively few, and I am not aware that we are yet in possession of any purgative substance which can be given thus, despite the attempts formerly made by Luton, followed by Gubler, with sulphate of soda and sulphate of magnesia. We are more successful with remedies that act on the stomach and produce vomiting, for we have a sure emetic in apomorphine introduced subcutaneously.

In order to give to subcutaneous injections greater activity, it has been proposed to inject the medicinal substance directly into trachea. These tracheal injections, applied by Jousset, of Bellesme, in pernicious fevers, have not become popular; at the same time, veterinary medicine has derived some advantage from them.

The advantages of hypodermatic injections are the causes also of the evils which result from them. When medicines are administered by the stomach, provident nature, by means of vomiting or diarrhœa, and especially through the action of the liver, which is a destroyer of alkakoids and of poisons, eliminates or otherwise gets rid of too large doses; while this is not the case with the hypodermatic method, and great care is therefore demanded in the administration of toxic substances by this method.

There is a law of therapeutics which you should not forget: *That medicaments act therapeutically only when they are eliminated.* When this elimination is wanting, the therapeutic effects cease, and give place to toxic effects.

When medicines are given hypodermatically, elimination by the intestines cannot take place, and there remains only the pulmonary emunctory and, especially, the renal. Hence this caution, to which there are few exceptions: That when there exists renal insufficiency, from whatever cause, you should be very reserved in the employment of subcutaneous injections.

Of all the hypodermatic injections, the most general is morphine, and it would take a volume to state the history of morphinomania.

The dangers of morphinomania are such, that I now reserve these injections for exceptional cases, and never allow the patient to make them for himself. I realize the inconvenience of always having to rely on a physician to practice these injections; at the same time I cannot but condemn the custom, which has become too prevalent in cases of neuralgia, etc., of leaving a hypodermatic syringe with the patient or family, and allowing persons with no medical knowledge to make the injections. I know that individuals are every day made morphinomaniacs by this custom.

Such are the general considerations which I wished to present concerning the hypodermatic method.

Paris, France.

THE THERAPEUTIC ACTION OF IODIDE OF STRONTIUM.

BY JOHN V. SHOEMAKER, A.M., M.D.*

Chemically pure iodide of strontium appears in the form of white crystalline plates, readily soluble in water, and having a slightly bitter taste. Unless perfectly pure, it is an unstable combination and is soon decomposed by the influence of air and light.

This salt occasions no gastric irritability when administered continuously for months in full medicinal doses. It inhibits fermentative processes and the development of micro-organisms. The phenomena of iodism have not been observed to follow the use of this compound. MM. Malbec and Lapicque report † that when injected into a vein it causes a sudden increase of arterial pressure, which, however, lasts but a few seconds and is followed by a notable retardation of the action of the heart. Large doses reduce arterial pressure and accelerate the cardiac pulsations, these effects being due to the iodine and not to the strontium. The strontium salt is better borne than that of potassium. Iodide of strontium is rapidly eliminated by the kidneys.

Iodide of strontium is an excellent remedy in certain constitutional disorders. I have employed it with very satisfactory results in a number of scrofulous manifestations. In those cases, so common in childhood and adolescence, of sluggish tumefaction of the cervical glands, this salt, if administered in time, will cause a gradual reduction in the size of the swollen ganglia. It acts at the same time as a constitutional tonic, improving the appetite and digestion. If caseous degeneration has already taken place, this medicine will, after the contents have been evacuated, check further disintegration and promote healing with as little loss of tissue and scarring as possible. The unsightly chronic ulcers left after the degeneration of glands and destruction of the superjacent integument, with their indolent and unhealthy granulations, their overhanging borders, the stasis of the circulation in the surrounding parts, which may be riddled with sinuses, constitute a condition in which the iodide of strontium is of peculiar benefit. The local circulation becomes more active, the granulations assume a healthy appearance, and, the overlapping edges being retrenched, the sore begins to cicatrize. Iodide of strontium is likewise serviceable in the treatment of chronic (the so-called "cold") abscess. In this very common scrofulous manifestation, after the cavity has been evacuated and disinfected, the systemic remedy exhibits a powerful influence for good. In strumous disease of bone or joint it arrests the morbid process and restores the normal nutrition of the parts. It is no less valuable in the management of those purulent collections, the result of bone disease, known as psoas or lumbar abscesses. In the early stage of hip-joint and Pott's disease this remedy, in addition to appropriate local means, is of decided efficacy in checking the progress of the affection. In scrofulous otorrhœa, ozæna, or ophthalmia, its effects are remarkably beneficial.

Diseases of the skin caused by scrofula or occurring in scrofulous subjects are ameliorated by the administration of iodide of strontium. Lichen scrofulosum, strumous acne, and eczema receive particular benefit. On account of its stimulant effect upon the absorbent system, this remedy answers a good purpose in those cases of chronic eczema, often so unamenable to treatment, in which the skin is infiltrated, thickened, hard, and inelastic. It must also be looked upon as a beneficial systemic alterative in lupus vulgaris.

Iodide of strontium has a good effect upon the early stage of tubercular processes wherever located. In pulmonary phthisis it contributes to general nutrition, checks infiltration and degeneration, and enables the affected tissue to resist farther inroads of the bacilli. I have seen decided improvement in laryngeal tuberculosis follow the exhibition of this salt. Tuberculosis in other situations is equally benefited by the use of this combination. I have already alluded to its good effects in tuberculosis of bones and joints, the scrofulous and tuberculous processes probably differing rather in degree than in kind.

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† La Tribune Médicale, June 9, 1892.

The various, and in many instances obscure, manifestations of rheumatism will often be found to yield promptly to the influence of iodide of strontium. This is particularly true of the chronic, subacute, or muscular varieties of the affection. The compound, however, is by no means destitute of virtue in acute forms of the malady, and may be very effectively employed when the salicylates disagree, are without good result, or, for any reason whatsoever, have been suspended. It is, in fact, generally a better practice in the treatment of acute rheumatism to discard the salicylate as soon as pain and swelling have subsided, and to replace it by an alkali. In those subacute attacks of articular rheumatism which occur from time to time under the influence of cold and dampness or as a result of deficient elimination, the iodide of strontium will often be found of signal service. It is likewise useful in those forms characterized by habitual stiffness of articulations rather than actual pain or swelling. Muscular rheumatism is alleviated by this remedy. Neuralgia dependent upon the same cause is relieved by use of the same salt. I have seen it produce good results in a case of sciatica, and also in trifacial neuralgia.

Iodide of strontium is of worth in the treatment of chronic gout and in the subacute exacerbations from which such patients suffer. The tendency to paroxysmal explosions is lessened, and the deposit of gravel and the formation of concretions are rendered less frequent or serious. Many of the usual manifestations of the gouty dyscrasia are signally relieved by the employment of this remedy. Like the other combinations of iodide, the strontium salt is of service in removing the fibrous thickenings occasioned by the disease. Being so much better tolerated than the iodide of potassium, the iodide of strontium can be exhibited for a more prolonged period without embarrassing digestion, and, in fact, will often relieve the digestive derangements to which gouty individuals are subject. It is of special value in gouty bronchitis. The strontium is equally as efficacious as the potassium salt in liquefying and decreasing the secretion of chronic bronchitis. This effect is heightened by its influence upon the cause which underlies the bronchial affection. Skin diseases which depend upon the gouty diathesis are benefited by the administration of the same remedy.

A number of diseases of the skin are frequently associated with a rheumatic or gouty state of the system. Eczema is especially related to the latter, though it may be excited by the former condition. Other affections which may be named in the same category are erythema multiforme and nodosum, purpura rheumatica, psoriasis, and paræsthesia. In all these maladies we frequently strike at the root of the disorder when the iodide of strontium is administered.

The treatment of psoriasis by heroic doses of iodide of potassium, as originally recommended by the Norwegian physician Dr. Greve, and subsequently by Boeck, Haslund, and others, both abroad and in this country, is, according to my experience, most efficacious when the cutaneous disease is dependent upon gout or rheumatism. I have recently had under my care several cases of psoriasis in which marked improvement resulted from the administration of iodide of strontium. This salt can be recommended in the treatment of those patients where, from the history, iodide of potassium would seem to be indicated but is not well borne by the system.

Iodide of strontium is a valuable addition to our medicinal armamentarium in syphilis. It is especially the late secondary and the tertiary manifestations which are amenable to its influence. For the reasons which I have already given, it is well adapted to act as a substitute or a succedaneum for iodide of potassium. Since obtaining a supply of the salt for the purpose of clinical experiment I have observed some very satisfactory results from its employment in syphilis. The large acuminated pustular syphilide appearing upon the scalp, very promptly retroceded under its use. It hastens the absorption of tubercular lesions, or promotes cicatrization if ulceration has occurred. In the treatment of rupia this compound is also of signal service. I have observed good results from its use in nodes of the tibia, and also in large ulcers produced by the breaking down of gummy deposits. The iodide of strontium has been of material benefit in the peculiarly intractable papulo-squamous syphilide of the palms and soles.

In one case of so-called syphilitic psoriasis, the patches of which were large, fissured and painful, the effect of the medicine was extremely satisfactory. I have observed the same action in the case of old syphilitic infiltrations. In a case of enlarged syphilitic testicle, or sarcocele, in a debilitated man of middle age, the use of the iodide of strontium was attended with remarkable benefit. The swelling progressively decreased, the hardness gradually disappeared, and at the expiration of several weeks the organ had nearly returned to a normal size and consistency. Syphilitic dactylitis and onychia, ozæna and laryngitis, syphilitic disease of bone and viscera, are also amended by administration of this remedy.

Diseases of the nervous system originating in rheumatism, struma, or syphilis, are relieved by the iodide of strontium. In chorea dependent, as it so often is, upon a rheumatic diathesis, or, as it may be, upon a strumous taint, the salt may be given with advantage. Cerebral syphilis, associated with disease of the cranial bones, gummy deposits within the brain, meningitis, or endarteritis, is unquestionably benefited. Syphilitic epilepsy, mental imbecility, paralysis, and tremors, are relieved by its employment. I may make the same observation concerning syphilis of the spinal cord causing tremors, incoördination and paraplegia, and syphilitic involvement of individual nerves giving rise to neuralgia and local paralyses or spasms. Syphilitic arthropathies will likewise be alleviated by this remedy. In fine, regarding the use of the iodide of strontium in later syphilis, I have found it in a number of cases often as efficacious as the iodide of potassium.

I have adverted, in a preceding portion of this paper, to the value of iodide of strontium in chronic bronchitis. In this affection it has the same effect as the potassium salt. In pulmonary tuberculosis it produces the beneficial effects of iodine. In asthma, especially when associated with chronic bronchitis, it may be employed with advantage. Its resolvent powers constitute it a serviceable remedy in chronic catarrhal pneumonia when the consolidation lingers and threatens to undergo cheesy degeneration. For its absorbent virtues, also, it may be advantageously administered in chronic pleurisy. Hypertrophy of the *breast* may be reduced by the exhibition of this salt, and it will probably be found of avail in the first stage of cirrhosis of the liver or kidney. By promoting absorption and elimination it has been found of utility in chronic intoxication by mercury or lead.

Dr. Zènenko, of Moscow, obtained, apparently, very excellent effects from the use of iodine of potassium in a series of cases of diphtheria. It is desirable that farther experience should be collected in this direction. It would seem fitting, also, that the strontium salt should be experimentally employed in that severe affection.

The compound of strontium promises likewise to be of benefit in the treatment of aortic aneurism. If the disease depends, as it often does, upon a syphilitis basis, the indication for its employment is strengthened. Professor Germain Sée expresses a very favorable opinion regarding the value of iodide of strontium in various affections of the heart.

In conclusion, it may be stated that the iodide of strontium is possessed of indubitable therapeutic power and is well adapted often to take the place of iodide of potassium, over which it has the advantage of being better borne by the stomach and general system.

THE ANTISEPTIC TREATMENT OF GENERAL INFECTIOUS DISEASES.

BY DR. E. TROUESSART.

(*Continued from May 10th.*)

CHOLERA.

This disease is produced by the *Spirillum choleræ Asiaticæ* of Fluegge, and designated by Koch under the name of the *comma bacillus.*

Hayem considers the lack of acidity of the gastric juice as one of the principal predisposing causes of the disease, and prescribes lactic acid in doses of 4 to 6 grammes (℥ j–jss) a day as a prophylactic means, and in doses of 10 to 20 grammes (℥ ijss–v) as a curative measure when the disease is declared. In bad cases he makes intravenous injections of common salt 175 grains, with 150 grains of sulphate of soda, to the quart of distilled water.

The new antiseptics, naphthol, betol, salol,

benzo-naphthol, have not yet been tried, at least in France.

The tonic and supporting treatment is still as necessary as ever.

In cholera infantum (which seems to be due to a microbe different from that of Asiatic cholera) Jules Simon prescribes the following potion:

℞ Salicylate of bismuth, 4 grammes.
Prepared chalk, 2 grammes.
Paregoric elixir, 10 drops.
Tinct. vanella, 1 gramme.
Peppermint-water, 10 grammes.
Malaga wine, 10 to 30 grammes.
Syrup acacia, 100 to 120 grammes.
M.

The dose of the above would be a teaspoonful every hour.

YELLOW FEVER.

This disease is produced by the *Bacillus amarylliæ* (Trevisan), whice has been studied by Cornil and Babes, and is found in the liver and kidneys of persons affected with this disease.

Yellow fever ought to be treated according to the rules of intestinal antisepsis in general. Purgatives, acidulous and gaseous drinks (champagne), quinine, etc., are the means thus far employed to combat this affection.

THE SWEATING SICKNESS.

This disease, still incompletely studied, epidemic but not contagious (?), is probably of microbic origin. It is quite common in certain regions of France, where it is associated with the eruptive and malarial fevers. Cold lotions, tonics, quinine, and ipecac, are the means thus far employed; repeated cold-water lotions, vinous lemonade, sulphate of quinine, dry cups to relieve the oppression.

EPIDEMIC GRIP: INFLUENZA.

The specific microbe of influenza was described first by Babes, then by Seifert, and more recently by Peiffer. It is the *Streptococcus Seiferti*, and much resembles the *Streptococcus pyogenes*, according to Babes, but ought to be considered as a true bacillus. It is found almost always associated with the *Staphylococcus aureus* and the *pneumococcus*, in the sputa of patients affected with the "grip."

Dujardin-Beaumetz recommends the following treatment:

Neuralgic form.—Give analgesin or exalgin in rum or some other alcoholic potion, in the dose of 2 to 3 grammes per day. Or give phenacetin in capsules of 15 grains twice a day.

Gastro-intestinal form.—Here the reliance must be on preparations of opium, *e.g.*, paregoric in 10-drop doses three times a day, constipation and diarrhœa being combated by appropriate laxatives or antiseptics (salicylate of bismuth, betol, naphthol, benzo-naphthol).

Catarrhal form.—Give 5 grains of quinine morning and evening. The dose of quinine may be associated with 15 grains of analgesin or 10 of phenacetin. The dose of quinine may be varied from 5 grains to 20 grains.

Aconite is sometimes useful in the acute attack. One or two drops may be combined with a fluidrachm each of syrup of Tolu and cherry-laurel water, and given every four hours. If the patient is much depressed, make subcutaneous injection of caffeine twice or three times a day:

Caffeine, } ää 2.50 grammes.
Benzoate of soda, }
Distilled water, q. s. to make 10 c.c.
M. [Each syringeful contains 0.25 of caffeine.]

CANINE RABIES.

The specific microbe of this disease is not yet known, nor does there seem to be any general antiseptic treatment. The inoculation of the virus attenuated by culture, according to Pasteur's method, is the sole method of cure yet recognized. The local treatment of the wound consists in cauterizing it with the hot iron; the chemical caustics are insufficient. The excision of a considerable portion of the soft parts bitten (skin, connective tissue, muscles) may be demanded.

TETANUS.

This affection seems to be due to the presence in the blood of the microbe (*Pacinia*) of Nicolaier, of which the germs are found habitually in vegetable mould. The inoculation takes place under the skin by a solution of continuity often almost invisible.

According to the recent researches of

Vaillard and Vincent,* this bacillus acts by a very active toxine similar to that of the microbe of diphtheria, *i.e.*, having the chemical characters of the diastases. It is a poison at first muscular, then having an elective localization in the spinal cord.

According to experiments made by these two observers, it is noteworthy that the bacillus does not seem capable of itself of producing tetanus; it needs besides a predisposing condition, such as a traumatism, the presence of lactic acid, or of another microbe, such as the *Microbacillus prodigiosus*. Now several species of microbes abound in the soil.

The presence, in the tissues, of lactic acid and the toxine peculiar to the microbe, destroys phagocytosis, which in the physiological state can of itself prevent the disease, as the leucocytes engulf the microbes and their spores and annihilate their toxic products (Vaillard and Vincent).

In accordance with the ætiology of this disease, we see the importance of seeking, at the very onset of the accidents, for the least solutions of continuity of the derm, and of treating them by the local antiseptics. The antiseptic dressing of accidental or operative wounds, to-day practiced by the majority of physicians and surgeons, ordinarily guarantees the patient against this complication. [The treatment of tetanus by subcutaneous injection of blood-serum from animals immune to the disease, has given some encouraging results. This serum contains certain antitoxines which have in numerous instances proved curative when the disease has been fully established. Schwartz, in La Semaine Médicale for April 5, 1893, reports two cases recently occurring that seemed to owe their recovery to these injections. An injection of 50 c.c. of the serum is a medium injection. This treatment, under proper antiseptic precautions, seems to be safe.]

MALARIA.

The intermittent or marsh fevers have for their factor a microscopic organism which is not a vegetal of the family of bacteria, like most of the other pathogenic microbes, but an animalcule of the group of *Sporozoa*, designated under the names of *Hæmogregarina malariæ*, *Hæmatophyllum malariæ*, or *Laverania malariæ*, the latter name being given in honor of M. Laveran, who first discovered the parasite in the blood of malarial patients.

The antiseptic which is justly regarded as specific in this disease is *quinine*.

In the quotidian form the quinine ought to be so administered that the last dose shall have been given eight hours before the expected chill; hence it is convenient to begin the administration almost immediately after the preceding chill. This is Jaccoud's method.

In the tertian form, give the quinine twelve hours before the time for the chill.

In quartan ague, give it fifteen to eighteen hours beforehand.

The elimination of the remedy being rapid, you must bring near together the periods of administration of the fractions of the full dose required, in order to keep the organism well under the influence of the drug. If you decide that 15 grains is sufficient, you will give this quantity in three or four equal doses an hour apart.

Large doses (30 grains or more) are often necessary to bring about suppression of the attacks; this being accomplished, the doses can be reduced so that the daily quantity shall not exceed 12 grains, for a number of days.

In grave cases, when the stomach will not tolerate the medicine, you can give hypodermatic injections of quinine hydrobromate. Dissolve one part in five parts of distilled water, thus:

℞ Hydrobromate of quinine, 1 gramme.
Distilled water, 5 grammes.

M. Three or four injections per day.

The preparations of cinchona, and arsenic and its salts, are principally used in the chronic forms of malaria.

SYPHILIS.

This disease, infectious, contagious, and inoculable by wounds of every kind, is considered as produced by the presence in the blood, and consecutively in the cellulo-vascular tissue and the bones, of the bacillus discovered by Lustgarten, the *Pacinia syphilitica*, a microbe whose specificity remains doubtful.

Save in congenital (hereditary) syphilis, it is admitted to-day that the starting-point of

* Annales de l'Institut Pasteur, 1891.

the syphilitic infection is always an inoculation of which the initial lesion is the indurated or infectant chancre. The soft (or simple) chancre does not give constitutional syphilis—which amounts to saying that it does not contain the specific bacillus of this affection, although it is equally of infectious or microbian nature. The microbe or microbes which produce it have not yet been sufficiently studied. It is probable that several species, notably those of pus, are associated here.

Local Treatment.—Whether we have to do with the simple chancre, or with the hard infectant chancre, the local antiseptic treatment is nearly the same.

Ricord employed the nitrate of silver (solution $\frac{1}{30}$), which brings about a cure in twenty-five to thirty days.

Iodoform may be expected to cure the chancre in about a week.

Salicylic acid is said to be still more active (Hebra). It is said to bring on cicatrization in four or five days. It is employed in fine powder, and covered with a thin layer of wadding. It should be renewed once or twice a day following the suppuration, and the sore washed every time.

Hot water, recommended by Aubert, of Lyons, under the form of prolonged baths (several hours), suffices in most cases.

Here are a few formulæ of ointments employed especially in indurated chancre:

℞ Iodoform, 1 gramme.
Balsam of Peru, 3 grammes.
Vaselin, 8 grammes.

M. For dressings. (Dujardin-Beaumetz.)

℞ Calomel, Oxide zinc, } āā 2 grammes.
Lanolin, Vaselin, } āā 15 grammes.

M. For dressings. (Mauriac.)

If the chancre is *phagedenic*, you will, after having removed the scabs, dress it three times a day with wadding coated with:

Calomel, 2 grammes.
Cold-cream ointment, 20 grammes.

Or once a day with the following ointment:

Pyrogallic acid, 5 to 10 grammes.
Vaselin, 50 grammes.

Or with the following when the sore granulates abundantly:

Chloral, 1 gramme.
Water, 100 grammes.

M. Sig. To be used once a day as a lotion to the venereal ulcer. Powder the sore afterwards with sub-carbonate of iron.

Terrillon also employs pyrogallic acid in phagedenic chancre:

℞ Pyrogallic acid, 10 grammes.
Starch powder, 40 grammes.

M. For dressings.

According to M. Du Castel, the indurated chancre gets well of itself in a given lapse of time, and the local treatment has a rôle which is rather hygienic and prophylactic than curative. Instead of the irritant topical applications, he proposes powders of salol or cinchona.

Resorcin, corrosive sublimate, or phenic acid may be employed, according to the indications. It is sometimes advantageous to paint with the following solution:

Alcohol, 20 grammes.
Phenic acid, 2 grammes.
M.

One painting a day for three or four days, rapidly transforms the chancre into a simple wound. Follow with a dressing of salol or aromatic wine.

General or Internal Treatment of Confirmed Syphilis.—This treatment is based on the employment of mercury or its salts, which have here an efficacy such that we may regard them as specifics. Iodine and the iodides are often associated or alternated with mercury.

Dujardin-Beaumetz has advised hypodermatic injections of chloropeptonate of mercury:

Peptone in powder, Pure chloride of ammonium, } āā 0.3 grm.
Corrosive sublimate, 0.2 gramme.
Glycerin, 5 grammes.
Water, 15 grammes.

M. [Each syringeful contains 1 centigramme of corrosive sublimate.] One injection every day or every two or three drys.

Mauriac gives protoiodide in pills. Each pill contains one-half a grain of protoiodide of mercury, with one grain of quinine; three of of these pills may be given daily.

The following syrup is also Mauriac's:

Biniodide of mercury, 0.1 gramme.
Iodide of potassium, 5 to 20 grammes.
Syrup aurantii cort., 200 grammes.
M. Dose: Two to three tablespoonfuls a day.

Give the maximum of the iodide in ulcerous syphilis.

Fournier remains faithful to the mode of administration of mercury by the skin, under the form of frictions of mercurial ointment. He begins by rubbing in 4 grammes (℥ j) a day, and increases gradually to 8 grammes (℥ ij). Women and especially children are most sensitive to these inunctions; in the latter, in the course of the first year, 1 to 2 grammes (15 to 30 grains) a day will suffice. The ointment is left in place eight to ten hours, and covered with wadding and sticking-plaster. After this, the region is washed with soap and water. The treatment is continued uninterruptedly three or four weeks.

Baths of corrosive sublimate, mercurial fumigations, etc., have also been employed in syphilis.

There are three periods in the systematic treatment of syphilis: *First*, that of local treatment of the chancres and buboes, if there are any; *second*, that of the mercurial treatment properly so called; (in the period of transition, the iodides and mercury are associated); *third* (tertiary period), that of iodide treatment alone.

The treatment of constitutional syphilis demands often three or four years. During this long space of time the prudent practitioner will institute the method of successive treatments, according to the directions of Fournier,* with its stages of repose, called periods of *accustomance*.

Paris, France.

SYPHILIS AND PEDERASTY, OPIUM-SMOKING AND CLIMATE.†

BY DR. MICHAUT.

However little we study the degree of frequency of syphilis among the different nations of the extreme Orient, we are struck by one fact: the contrast which exists in this respect between certain peoples in close geographical proximity and very analogous, anthropologically speaking. The very gravity of the accidents and the prognosis of the malady differ completely, according as the patients are selected from this or that nationality.

Whilst extremely grave and of sombre prognosis amongst certain peoples, syphilis may assume a great benignity in its manifestations amongst their neighbors. In such cases there prevail, without doubt, reasons due to relative immunity and to the more or less marked attenuation of the poison, according as the appearance of the malady dates back to a remoter or more recent period in the history of these races; but assuredly the mode of inoculation also plays a rôle. Syphilis ravages with greater severity those places where the subjects contract it abnormally, that is to say, by *extra-genital inoculation*. In brief, syphilis contracted amongst the peoples who are addicted to habits of pederasty exhibits a more virulent character than the syphilis of races less depraved.

We should remark further: Certain chronic intoxications seem to beget a predisposition to an aggravation of the pox—whether these intoxications, by diminishing the resisting power of the patients, render the accidents more violent amongst them; or whether they produce habits of pederasty by depraving the morals of the subjects. Hence it is that the races among whom opium-smokers are numerous, are ravaged by syphilis in a form generally serious, and that the same people are addicted to sodomy.

From all of which we may deduce the following law: That syphilis, opiomania, and pederasty are the three elements of a kind of nosographic tripod, encountered amongst different peoples of the extreme Orient. These constitute three enemies of public hygiene, which always march together and lend one another, after a fashion, a mutual support.

This law not only prevails amongst the natives; it extends to the Europeans, and in this fact lies the justification of the present study. In our entire colonial empire* of the extreme Orient—Cochin China, Anam, Tonkin, Cambodia—public hygiene is at war with these three enemies which form a sort of

*See Dujardin-Beaumetz' Clinical Therapeutics (G. S. Davis, Detroit); article, "On the Treatment of Syphilis."

†Translated from the Bulletin Général de Thérapeutique.

*Dr. Michaut writes from the standpoint, politically, of a citizen of France.

morbid triple alliance destructive to the health of our colonies.

Let us select a few examples in order to demonstrate the truth of these assertions.

Syphilis is general amongst the Coreans and the Anamites; non-contaminated persons are the exception. They become relatively rarer in China, and Japan is last on the list of the syphilitic races of the extreme Orient. Syphilis is particularly grave amongst the Coreans and Anamites; it is very mild amongst the Japanese. Europeans who contract the malady in Indo-China are exposed to accidents of extreme violence; the prognosis of the malady is always serious, and death is only too often the termination of the disease there contracted. Syphilis contracted in Japan is rarely dangerous, and exceptionally it produces amongst the Europeans accidents of some gravity. In the greater number of the cases that I have observed, the entire malady has developed without ever presenting other accidents than a dwarf chancre accompanied with a slight ganglionary engorgement, a roseola, and several mucous plaques—no other accidents. In Indo-China the general condition declines rapidly, the anæmia is profound; we not seldom observe phagedenism, terrible ulcerous accidents deforming the visage forever (sloughing away of the nose, perforation of the palatine arch, serious iritis, osteitis, etc.)—accidents which are unknown in Japan.

Moreover, pederasty is general in Corea; it is one of the prevailing customs. It is performed publicly, in the street, without the slightest reprobation being visited upon those who render themselves guilty of what we Europeans term *flagrant immorality, outrages upon decency*. The Corean of easy circumstances maintains young servants who are the companions of his pleasures. The immoralities of the Roman emperors of the decadence are as naught in comparison with the vices of the Coreans; there is not a Corean house which is not the scene, in itself alone, of more sexual aberrations than Suetonius presents in his description of the palace of Tiberius.

In Anam and in Tonkin, it may safely be said, pederasty exists on a scale which is not less extensive, among the natives as well as the Europeans. The boys called *lantern-bearers* constitute a vast corporation which the exotic romance-writers have too well described to require that we here expatiate on this form of masculine prostitution. In a purely medical study we may state that in a colony in which the French population is composed chiefly of functionaries, pederasty prevails widely – and this without disparagement of the honorable character of our colonial administration. It is a question of latitude which justifies this parody of the celebrated reflection of Pascal: "Immorality this side of the ocean, morality beyond!"

In China, pederasty is an equally common thing, although less frequently presented to the eyes of Europeans.

From these remarks it may accordingly be concluded that there is an almost perfect parallelism between the frequency and gravity of syphilis, on the one hand, and the habits of pederasty characteristic of the different nations of the extreme Orient. Syphilis is all the more dangerous if contracted in a country where sexual relations most often prevail between individuals of the same sex. In a word, the contagion seems to be more virulent when operating between individuals of the same sex; and this is as true of communities as of individuals.

In Japan, where pederasty is unknown, syphilis is attended with little danger to the Europeans and natives, except in one single province—the province of Satzuma; this is likewise the only province where pederasty was formerly known.

If now we examine the frequency of drunkenness, whether alcoholic or narcotic, we find that, all other things being equal (that is to say, opium-intoxication in the Orient, bearing to alcoholism the relation of one to ten), pederasty follows with precision in the traces of opiomania, and the morphinism of the smokers has no more faithful companion than pederasty.

The latter observation will appear quite natural when it is considered:

1. That one of the first effects of opium is the perversion of the sexual instinct, the loss of moral feeling, and the enfeeblement of the will.

2. That the Anamite woman, like the Corean woman, is generally hideous, and

that, moreover, certain incorrigible habits render her repulsive (the lacquering of the teeth in black, which transforms the mouth into a horrible cavity seemingly toothless; the general habit of chewing the betel, staining the tongue and the lips with a red juice which the woman is constantly expectorating).

It may be stated that in Tonkin, as in Cochin-China, the prostitution of the boys is much more dangerous in its bearing upon public health, than is feminine prostitution. And the former has passed into colonial morals.

As strange as the proposition may appear, it is equally true that the first duty of the hygienist would be to demand the establishment of a dispensary for men, and of medical surveillance over the male prostitutes.

Laying aside the narrow rigor of a moral hypocrisy dangerous to the future of the colony, the civil administration and the military health councils should require, as a means of guarding the health of those in their jurisdiction, the regular establishment of a medical service for the supervision of masculine prostitution. This desideratum, which, proclaimed before a metropolitan council of hygiene, would be greeted with cries of stupefaction, is perfectly legitimate in our Indo-Chinese colonies!

To veil the evil and to close our eyes to its causes, is dangerous and inhuman.

The only remedy lies in attacking the malady at its origin. Politics unfortunately enter into certain questions which should remain strictly within the domain of medicine. The general interest of the public health should silence certain opinions too visibly due to self-interest.

The English Government has been severely reproached for favoring the opium-commerce in India, and its action has been spoken of as arch-inhumanity. Should we not invoke the same reasons for the suppression of the opium-farms in Indo-China?

To whomsoever has been in Indo-China, the truth manifests itself at the first step taken in Tonkin. The climate of this colony is far from being as bad as some would have us believe, *and a great number of the alleged victims of the climate have died from the effects of opium!* While the pharmacists of Paris are forbidden from dispensing morphine or laudanum without the prescription of a physician, in Indo-China the government constitutes itself the grand purveyor of opium. The money of the salaries paid by the government to its functionaries, returns to the government through the medium of the opium-shop kept by a governmental agent. Is not this a proceeding unworthy of a government which in other places seeks to protect the public health? In France we seek to diminish the progress of alcoholism; in Indo-China we encourage morphinism—a hundred times more terrible than alcoholism. We win money with the health of our colonial agents.

Even should it cost us half the revenues which the colony actually yields to the metropolis, hygiene demands the destruction of the terrible scourge of our colonies: opium!

Yokohama, Japan.

THE JUSTIFIABLE PREVENTION OF CONCEPTION.

The physician not infrequently has to warn against conception in cases where a pregnancy would endanger the life or the health of the patient. Pelvic contraction, abdominal and uterine tumors, etc., form such an indication. The advice to abstain from coitus is but seldom followed, and the means usually employed to prevent gestation (mechanical) are objectionable from a hygienic and ethical point of view. Kleinwächter has endeavored to find a remedy which would have none of the aforementioned drawbacks. He prescribes a cacao-butter suppository containing 10 per cent. of boracic acid, to be introduced high up into the vagina. These suppositories dissolve in about one hour, and the liberated acid destroys the spermatozoa. Bichloride of mercury in 0.001-gramme doses can also be used, but in that case a vaginal douche has to follow the sexual act. The solvency of the suppository is heightened by adding one grain of oleum olivæ. The author considers this a safe and sure remedy to prevent conception. Therapeutic effects may be combined by the adding of various drugs—for instance, tannin in cases of uterine catarrh.

Correspondence.

THE POPULARITY OF CYCLING IN FRANCE.

The Paris correspondent of the Cincinnati Lancet-Clinic sends a communication translated from the Journal de Médecine de Paris, on Cycling in France:

It appears, among the fervent admirers of this sport, that 'cycle exercise is very salutary. Doubtless walking, horseback exercise, and fencing are precious auxiliaries for the hygienist, but the 'cycle is much preferred to any other movement.

"Cycling," says Dr. Chambard, "is an exercise of the first order. It not only strengthens the muscles of the limbs, but the entire body. It stirs up the hæmatosis, stimulates the appetite, regulates the pulsation of the heart, exercises the eye, and gives a cool head to the most nervous. It makes red blood and cures chlorosis and anæmia. A short run on the bicycle is the best aperient I know, and I have no doubt that in stimulating the heart it enlarges the chest and increases respiratory capacity, thus preventing cardio-pulmonary affections. I never hesitate, as far as I am concerned, in advising consumptives to take all of this kind of exercise possible in the open air."

Dr. Douglass Hogg says: "Gymnastic exercise and fencing are usually taken in confined spaces, very often in badly ventilated rooms. Muscular fatigue, lassitude, and disgust often follow under such circumstances."

It is unnecessary to say that these are not isolated opinions on this subject. Our amiable fellow-physician, Dr. Jennings, who for a number of years has praised cyclism, assures us that since the publication of "Health by the 'Cycle" he has received hundreds of enthusiastic letters. In expressing their passion for this variety of physical exercise, the correspondents almost always make use of such terms as "devoted to bicycle-riding," etc.

It is true that cases may be cited where enthusiasts of the velocipede have abused it and died. But all over-exercise, no matter what its character, offers the same danger.

One argument invoked by the detractors of the 'cycle is that the Government has placed a tax on the machine. Now anything that can fill the coffers of the State is taxed, and the immense revenue derived from these machines evidences their popularity from the number in use. The last statistics in France show that over 300,000 velocipedes are in active use. This is a highly respectable showing, and evidences to what point this popular sport has risen. From the simple peasant to the king, all the world is given up to this gymnastic amusement. The King of Servia, the Prince of Wales, and the Prince of Monaco are all fine velocimen. Almost all the English ambassadors, Lord Dufferin at their head, are ardent bicycle-riders. In finance we have the Baron Rothschild; as editors there are Arthur Meyer and Cornely; as novelists, Richepan and Dargens. In Parliament Drs. Clement Clements and Michou are great straddlers of the machine. You will not be surprised, then, that Michou made such a bitter fight in the Legislature against taxing bicycles. Among the medical velocipedic cranks who have participated in Parisian bicycle races, we find Profs. Grancher and Straus of the Faculty of Medicine; Drs. Leon Labbe and Albert Robin of the Academy; and such accoucheurs and surgeons as Dr. Louis Championniere and all his family, Dr. Bonnaire, and the editor of the Journal de Médecine de Paris, Dr. Lutaud. Then there are Drs. Douglass Hogg and Jennings, Drs. Trousseau and Valude, Dr. Landowski, Dr. Combes, and many others.

With such apostles of the bicycle it is necessary to suppose that it will be the popular means of locomotion in the future.

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It has been proved that the first velocipede was invented by Dr. Eli Richards, of Rochelle. The idea has proved fruitful of devices for overcoming the obstacles of rough roads and mechanical friction, and for combining strength with manageability. That these difficulties and others have been reduced to a reasonable minimum, is evident to all observers; and among the best and most elegant of modern means of highway transit may be reckoned the machines made by the Pope Manufacturing Co.—the celebrated Columbia bicycles, on which some of the world's best records have been made.

J. H. W.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

The following programme has been arranged for the eleventh annual meeting of this Association, at Milwaukee, Wis., June 5, 1893.

The general business meeting will be held at 4 P.M. The President, Dr. Culbertson, will deliver an address. Dr. Gould will read a paper on "Medical Orthography." This will be followed by a paper on "Some New Phases of Journalism," and a discussion. Reports of committees and election of officers and other business will conclude the session.

The banquet will be given at 6.30 P.M., and be followed at 8.30 by the annual address, by Dr. Ernest Hart, editor of the British Medical Journal.

This will be followed by an address on Editorial Responsibility and Questions of Libel," by the Hon. Clark Bell, editor of the Medico-Legal Journal and president of the International Medico-Legal Congress. Dr. G. Stanly Hall, editor of the Psychological Journal and president of Clark University, will address the Association on "Psychological Phases of Medical Study and Journalism." Discussion and remarks will follow.

J. C. CULBERTSON, *President.*

T. D. CROTHERS, *Secretary.*

Hartford, Conn., May 10, 1893.

PROGRAMME OF THE OBSTETRICIANS AND GYNÆCOLOGISTS.

The American Association of Obstetricians and Gynæcologists will hold its sixth annual meeting at the Russell House, Detroit, Mich., on Thursday, Friday, and Saturday, June 1, 2, and 3, 1893, under the presidency of Dr. Lewis S. McMurtry, of Louisville. The medical profession in general is invited.

The following is the preliminary programme as far as titles are announced:

1. The President's Address: The Present Position of Pelvic Surgery. By Dr. L. S. McMurtry, Louisville.
2. Abdominal Fixation. By Dr. Florian Krug, New York.
3. Endoscopic Tubes for Direct Examination of the Interior of the Uterus and Bladder. By Dr. Robert T. Morris, New York.
4. Placenta Prævia. By Dr. William H. Wenning, Cincinnati.
5. What are the Indications for Abdominal Section in Intrapelvic Hæmorrhage? By Dr. M. Rosenwasser, Cleveland.
6. Treatment of Metritis. By Dr. E. Pietranera, Cordova, A.R.
7. A Plea for Better Surgery in the Closure of the Abdominal Incision. By Dr. H. W. Longyear, Detroit.
8. Remarks on the Treatment after Abdominal Section. By Dr. C. C. Frederick, Buffalo.
9. The Management of the Abdominal Incision. By Dr. Charles A. L. Reed, Cincinnati.
10. Dilatation of the Cervix for Dysmenorrhœa. By Dr. E. M. Pond, Rutland.
11. Intra-uterine Pregnancy: with Report of Cases. By Dr. George S. Peck, Youngstown.
12. A Contribution to the Study of Ectopic Gestation. By Dr. E. Arnold Praeger, Nanaimo.
13. A Few Practical Notes on the Establishment of Anastomosis between the Gall-Bladder and Intestine for Obstruction of the Common Duct: with the Relation of a Case of Obstruction of the Common Duct by Small Growth. By Dr. James F. W. Ross, Toronto.
14. Vaginal Hysterectomy for Malignant Disease. By Dr. Rufus B. Hall, Cincinnati.
15. The Care of Pregnant Women. By Dr. John Milton Duff, Pittsburgh.

THE GOOD THAT NEW REMEDIES ACHIEVE.

Dr. Cyrus Edson, in the North American Review, reminds those who prematurely pride themselves on the virtues of some new remedy, that all new remedies do good—for a time; the physician who persuades his patient of the virtues of his means has half cured him already.

A successful physician is well convinced of the beneficence of his own work, and rightly so, says Dr. Edson; in this the physician is not wrong, but he is sometimes mistaken in his inference that his success lies in the matter of his prescriptions.

A cheery, hopeful assurance buoys up the sinking life, and, as the dominant "fad" of the moment inspires both doctor and patient, the orbit of function under this inspiration lurches round again towards its proper equilibrium. The sick man who "gives in" dies; he who has faith and confidence recovers.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., MAY 25, 1893.

Editorial.

THE CARE OF THE PUERPERAL WOMAN.

Antiseptic midwifery is no *fad*, and the general principles of treatment of the lying-in woman, both during and after parturition, have not changed since they were first formulated by Lusk, Thomas, Garrigues, and others, several years ago. Those physicians who have been the most careful as to the rigid antiseptic management of their puerperal cases, have had the fewest septic accidents to report. This statement will hold good in reference to both hospital and private practice.

The scrupulously careful obstetrician will pay especial attention to cleanliness of his hands and instruments; some, indeed, take no other antiseptic precautions. The hands are thoroughly scrubbed in hot soapsuds, and the finger-nails well cleaned, before any examination is made or any assistance is rendered; and the hands are washed in sterilized water before each subsequent examination. The instruments are dipped into boiling water before being used. These precautions will in the great majority of cases insure the puerperal woman against infection. It is, however, needless to say that hands which have been scrubbed in hot soapsuds are not yet surgically antiseptic, as the very thorough experiments of Halstead and Welch at the Johns Hopkins Hospital have proved.

The hands will be more antiseptic and less likely to convey infection if they are washed in corrosive-sublimate water before being brought into contact with the patient. It is not much trouble to do this, and we know many painstaking obstetricians who always carry a small bottle of sublimate tablets (7½ grains) in their pockets; one of these tablets in a pint of warm water makes the required solution for disinfecting the hands.

Some of the earlier treatises (and there is still none more practical and useful than that of Garrigues on "Antiseptic Midwifery," published in George S. Davis's series) advise an antiseptic douche before delivery, and in protracted cases a repetition of the douche every three hours. It must be admitted that the majority of physicians do not now rigidly follow out this rule, as a routine practice, and are even reserved in ordering douches after confinement, unless there seems to be some special urgency. In this country, as in Germany, obstetricians are divided into two parties—one of which uses antiseptics in abundance, considering the internal surface of the vagina and cervix uteri as an operative field which should be disinfected before parturition; the other attaching very little importance to self-infection and occupying itself in removing poisons actually present in or upon the genital organs.* Adherents of the latter doctrine limit themselves to the strictly necessary introduction of fingers and instruments into the vaginal canal. Hegar, who has made exhaustive investigations in the grand duchy of Baden to determine the value of antiseptics in obstetrical practice, affirms that the use of antiseptics in obstetrical practice has not diminished the mortality from infection in women attended by midwives, and the number so attended is far greater than the number attended by physicians. The use of antiseptics requires the introduction into the genital passages of instruments which are too often the media for the transmission of pathogenic organisms. "It would seem," he says, "that a step in the right direction would be the requirement that midwives abstain from making injections and vaginal examinations in cases in which parturition is proceeding normally."

It is to be noted that Axmaun, who has been at the head of the Maternity at Erfurth for the past thirty years, puts himself on record as agreeing substantially with the above views, and he regards corrosive sublimate and carbolic acid "as toxic agents too dangerous for use in inexperienced hands."

*Journal de Médecine, Feb. 15, 1892. New York Medical Journal, June 27, 1891. Sajous's Annual, 1892, vol. ii, article "Obstetrics."

The "let alone" treatment is strongly ged by Traill Green, Hiram Corson,* and hers, who appeal to the remarkably suc- ssful results of physicians who, in a life- ng practice, have ignored antiseptic mid- ifery completely. At the same time, the atistics from Maternities in all parts of the orld show that the danger from puerperal fection is still a real one, and is only obvi- ed by the attention to details such as Cor- n and others deem unimportant. (See Dr. . L. Richardson's exhaustive summary in ajous's Annual for 1889; also Chapter I of arrigues' treatise above cited.) It is prob- ble that the desired mean is obtained at the oston Lying-in Hospital. Proper precau- ons are taken to make aseptic everything at comes in contact with the parturient anal during or after labor; then the let-alone olicy is pursued, in the absence of special dications for interference. It will be seen at this is a great deal: the underclothing hich the puerperal woman wears, the sheets n which she lies, are aseptically clean; the ads applied to the genitals, the binder, etc., ave also been rendered aseptic; and the ands of the physician or midwife are kept crupulously antiseptic by the constant use of sublimate solution and eucalyptus-vaselin.

There is another point on which there is ubstantial agreement among the obstetri- ians of to-day. If, during the attendance fter confinement, any fetor of the lochia levelops, and especially if this be attended vith a febrile rise (101°–103° F.) and a quick- ned pulse, there is an indication for an ntravaginal and perhaps an intra-uterine louche. The nurse ought to be sufficiently lert to attend to the vaginal injection—with- ut waiting for the physician to order it— he moment she detects fetor of the dis- charges; and if this does not disinfect the ochia it will be the duty of the physician to wash out the uterus with a weak carbolic or peroxide-of-hydrogen solution. In this way, and in this only, threatening attacks of puer- peral septicæmia can be averted. It may be that only one lavage of the uterus will be needed, especially if this be followed by the introduction through a Sims speculum of a 10-grain iodoform pencil. In cases of abortion, a thorough curetting and subse- quent washing out of the uterus may be absolutely necessary to remove impurities.

It is needless to say that the same care should be taken to have the syringe aseptic as is taken with the hands, and no instrument should be used until it has first been sterilized.

These will seem to be old and familiar truths to many, but the reason why we have again called attention to them is that some will be in danger of forgetting them. The old fogy who still sneers at "germs" may think antiseptic midwifery encumbered with too great fussiness of details, but it is quite possible that valuable lives may now and then, in the life-time of even a country phy- sician, be saved by rigid attention to these minutiæ.

* Sajous's Annual, *loc. cit.*

THE CHOLERA DISCUSSION AT THE GERMAN CONGRESS OF MEDICINE, APRIL 12, 1893.

At the recent German Congress of Inter- nal Medicine, held at Wiesbaden, Rumpf of Hamburg, referee, formulated the following conclusions concerning cholera:

1. The comma bacillus must be regarded as the causal element of Asiatic cholera; at the same time, its presence in the intestine does not necessarily warrant the inference that the patient had cholera or another dis- ease similar to cholera.

2. The discovery of the comma bacillus in the intestine of a healthy person would be proof presumptive that the bacillus had momentarily lost its virulence. In order that cholera may manifest itself, adjuvant condi- tions are necessary, and especially individual predisposition.

3. Individual predisposition consists essen- tially in a digestive disorder caused by im- proper food or other morbid factors.

4. Despite the presence of the comma bacillus in the intestine, it is sometimes im- possible to demonstrate it during several days of the sickness.

5. The stage of coma is due chiefly to the absorption of toxines.

6. The comma bacillus may persist in the intestine till the eighteenth day and perhaps longer, with all its activity.

7. There exists no specific treatment for cholera.

Gaffky of Giessen, co-referee, insisted on the rôle played by Koch's bacillus in ætiology, and affirmed that if Lesage, Macaigne, and others have not constantly found the specific bacilli, it is because they have not employed the proper technique (procedure of Schottelius). He alluded to the experiments on themselves made by Pettenkofer and Emmerich (who, it will be remembered, swallowed cultures of the cholera bacillus), and gave as his opinion that the symptoms which followed in both cases (diarrhœa, borborygmi, thirst, abundant liquid stools for several days containing comma bacilli and requiring laudanum, general malaise, etc.) were the symptoms of a mild attack of cholera. As for the cause of the symptoms of grave cases, he referred them to the action of a poison fabricated by the comma bacillus. Pfeiffer, experimenting principally on guinea-pigs, which present the symptom-picture of grave cholera, affirms that this toxine is produced by the comma bacillus during its life, or at the moment of its death and decomposition. On the other hand, Grüber and Weiner think that the poison is engendered by the bacillus at the expense of the infected organism, and chiefly by the action of the products of decomposition of the bacillus after its death on the cells of the animal infected. The infectious character of the comma bacilli which have quit the organism with the dejections is sufficiently demonstrated by the observations of direct contagion, and by the cases of extension of the disease through the medium of water. In cholera dejections preserved at Hamburg during three or four months, the comma bacilli kept their vitality. If water plays the most important rôle in the extension of the malady, it is due to the fact that these microbes, when they are swallowed with a great quantity of liquid, have a better chance to traverse the stomach with impunity. This circumstance also explains why cholera prevails more during the heat of the summer or in the beginning of autumn, when people drink the most water.

Baëltz, of Tokio, Japan, stated his personal experience in some epidemics of cholera in Japan. In one of these epidemics 100,000 individuals lost their lives. China is also a hot-bed of cholera. His observations have convinced him that cholera is propagated principally by potable water. He believes that cholera is an infectious poisoning of the nervous system. The theory of *aqueous losses* does not explain all the phenomena. The most violent and most fatal cases are, in fact, sometimes remarkable for the trifling extent of the attendant diarrhœa. On the other hand, it is the nervous symptoms, and notably the præcordial pains, which correspond to the gravity of the disease. He has frequently seen, in Japan, cholera patients throw off all their clothing, even in a cold season, and succumb without any cyanosis; this leads him to refer the gravity of the cases to the intensity of the systemic intoxication. At other times he has, in patients almost asphyxiated, seen the pulse rise without previous absorption of a notable quantity of water—which is also in disagreement with the theory of aqueous insufficiency. In cholera the activity of the bacilli produces an energetic current of liquid into the interior of the intestine. When the noxious influences cease to act, the pulse becomes better; there is then produced an inverse current from the intestine to the blood, and the noxious elements which were in the intestine may be at the same time swept away in the blood-stream and produce phenomena of systemic intoxication. It is not rare at such times to see urticaria-like erythemata, simulating the rashes produced by spoiled meat or fish. Quarantines are useful only when they are strictly observed, as they have been in America against yellow fever. In Japan, the infected place is surrounded by military cordons, and no one is allowed to escape beyond the lines. From a therapeutic point of view, no remedy has given very favorable results; at the same time, the speaker thought well of rectal, and even hypodermatic, injections of weak saline liquids.

Klemperer, of Berlin, spoke of the attempts to obtain preventive inoculations against cholera. He has succeeded, with much certainty, in giving to animals immunity against cholera-infection when taken into the stomach. He employs a culture of such a toxicity that $\frac{1}{500}$ c.c. of the broth suffices to kill a guinea-pig. He has not succeeded in immunizing guinea-pigs against a culture dose twelve times as large. This failure is due to

the fact that the mode of preparation employed exercises on these little animals a debilitating action, and so enfeebles them that inanition and an intercurrent affection carries them off. He thinks that it will be necessary, in order to obtain a higher degree of immunization, to give up the direct method of injection of the toxic substance, and to resort to immunization by means of milk or the serum of large animals previously immunized. He is now engaged in immunizing a cow which has already received more than a liter of virulent culture, and whose milk is so antitoxic that $\frac{1}{10}$ c.c. suffices to protect a guinea-pig against fatal intoxication. He says that he has the certainty of augmenting, by the aid of continually increasing injections, the antitoxic power of the milk to such a degree that the same dose will protect against much more intense intoxications. These researches necessarily take time, for experimenters have to feel their way along slowly. Nevertheless, Klemperer expects soon to be able to utilize this antitoxic milk for human immunization. The tentative trials which he has thus far made have convinced him that the reaction of the human organism is identical with that of the animal, and that notably the serum of the immunized man equally acquires the antitoxic property. He has ascertained that the serum of cholera patients in convalescence possesses considerable antitoxic power, recurrence being quite exceptional. Besides, it is to be noted that many healthy persons who have never had cholera possess a certain antitoxic power, and he thinks that he finds in this fact the explanation of the natural immunity which so many possess.

Fränkel, of Hamburg, said he had found the presence of the comma bacillus of great diagnostic value. The fall of the bodily temperature plays a more important part in the production of the cholera symptoms than the losses of water. The toxic principle acts in a striking manner on the kidneys; in three out of a hundred cases he has found the cells necrosed. The renal alterations are similar to those which are found in persons who have succumbed to typhoid fever, to pneumonia, or to diphtheria of short duration.

Rumpf, in reply to Klemperer, said that while much was to be hoped for the future from injections of serum, thus far not much has been accomplished by this method. He has tried these injections without success in thirty-five cases. He affirms, in opposition to some of the other speakers, that a first attack gives no immunity against a second.

MALPRACTICE.

In a paper by Clark Bell, read before the New York Medico-Legal Society, the author defines the law on this subject. He cites many cases on record which substantiate his opinions.

Malpraxis may be defined as bad or unskillful practice in a physician or surgeon, whereby the health of the patient is injured.

Negligent malpractice embraces those cases where there is no criminal intent or purpose, but gross negligence in bestowing that attention which the situation of the patient requires.

Ignorant malpractice is the administration of medicines, or the treatment of the disease, fracture, or injury in a way calculated to do injury which actually does harm, and which a properly educated, skilled, and scientific medical man or surgeon would know was not proper in the case.

Physicians and surgeons, by holding themselves out to the world as such, engage that they possess the reasonable and ordinary qualifications of their profession, and are bound to exercise reasonable and ordinary care, skill, and diligence, but that is the extent of their liability. The burden of proof is upon the plaintiff in actions for malpractice to show that there was a want of due care, skill, and diligence, and that the injury was the result of such want of care, skill, and diligence.

The reasonable and ordinary care, skill, and diligence which the law requires of physicians and surgeons are such as those in the same general line of practice, in the same general locality, ordinarily have and exercise in like cases.

In Pennsylvania, McCandless *v.* McWha, 22 Pa. St., 261, the courts held that such skill is required "*as thoroughly educated surgeons* ordinarily employ," but the weight of authority is as first above stated.

The locality in which the physician or

surgeon practices should be taken into account. One in a small town or sparsely settled country district is not expected to exercise the care and skill of him who resides and has the opportunities afforded in a large city. He is bound to exercise the average degree of skill possessed by the profession generally in the locality in which he resides and practices.

Physicians and surgeons should, however, keep up with the latest advance in medical science, and use the latest and most improved methods and appliances, having regard to the general practice of the profession in the locality where they practice, and it is a question for the jury to decide from all the circumstances of the case whether the physician or surgeon has done his duty in that respect.

If a physician or surgeon departs from generally approved methods of practice, and the patient suffers an injury thereby, the medical practitioner will be held liable, no matter how honest his intentions or expectations were of benefit to the patient.

Physicians and surgeons are bound to give their patients their best judgment, but they are not liable for mere error of judgment.

If the error of judgment is so great as to be incompatible with reasonable care, skill, and diligence, the physician or surgeon would be liable.

If the patient in any way contributes to the injury by his fault or neglect, he cannot recover for malpractice by the physician or surgeon.

And this doctrine holds where the physical weakness of the patient or his natural temperament is the contributory cause of the injury.

Damages may be recovered for pain and suffering produced by the negligence or want of skill of the physician or surgeon, and also for loss of time and expense incurred on account of the improper treatment.

AUSTRIAN APOTHECARIES TO VISIT THE WORLD'S FAIR.

The Pharmaceutische Post, of Vienna, Austria, of April 23, 1893, gives a detailed report of a journey to be undertaken by Austrian apothecaries to the World's Fair; the club of apothecaries to undertake the journey evidently under the leadership of Dr. Hans Heger, editor of the Pharmaceutische Post, and to take the following route: Nuremberg; Frankfort-on-the-Main; Mayence; Coblentz; Bonn; Cologne; Amsterdam; Rotterdam; Harwich; Liverpool. From there they go to Quebec, Montreal, Niagara Falls, Detroit, and Chicago.

With reference to their visit to Detroit, the Post says:

"We now proceed along the shores of the Erie Lake, to Detroit, where we will have the opportunity to inspect the grandest pharmaceutical establishment of the world, namely, the laboratories of the world-famed firm of Parke, Davis & Co., a description of whose works was given in a late number of this journal, and which firm is ever ready to offer to their Austrian colleagues the freedom of their establishment."

A MUNIFICENT GIFT.

The British Medical Journal of April 29th says: For some time past it has been the intention of a group of charitably disposed persons at Vienna to found an asylum for patients affected with diseases of the chest. Only a portion of the sum required was forthcoming, but on April 22d Baron Nathaniel Rothschild informed the society which was endeavoring to collect the necessary funds that he wished to present them with his chateau at Reichenau, in the Semmering, for the new establishment. It would be difficult to overestimate either the timeliness or generosity of this gift. The extensive estate and pleasure grounds, worth 5,000,000 florins, are widely known as one of the most beautiful in the Styrian Alps. The Baron will transfer the chateau and grounds to the society on August 1st, and he also undertakes to make all the necessary alterations. It is hoped that it can be got ready for the reception of patients during the coming winter. Baron Rothschild has already thrown open his beautiful park and greenhouses in Vienna to the public for a small entrance fee, which goes to a local charity. His chateau in the Semmering will afford accommodation for about 500 beds.

Book Notices.

PSYCHOPATHIA SEXUALIS, WITH ESPECIAL REFERENCE TO CONTRARY SEXUAL INSTINCT. A Medico-Legal Study. By Dr. R. von Krafft-Ebing, Professor of Psychiatry and Neurology, University of Vienna. Authorized translation of the seventh, enlarged and revised, German edition, by Charles Gilbert Chaddock, M.D., Professor of Nervous and Mental Diseases, Marion-Sims College of Medicine, St. Louis. In one royal octavo volume, 436 pages; extra cloth, $3.00 net; sheep, $4.00 net. Sold only by subscription. Philadelphia: The F. A. Davis Company, Publishers, 1914 and 1916 Cherry St.

Sexual psychopathy, or sexual perversion, is a subject of intense interest to the student of criminology as well as to the alienist. To the pure moralist, the sexual pervert is an unsolvable problem. To the physician who is conversant with recent investigations of Benedikt, Lombroso, and Krafft-Ebing, the subject of this form of pathomania is apt to be regarded more as a victim of hereditary and anatomical abnormalities than as a criminal, because his peculiar mental and moral manifestations can often be traced to morbid physical conditions. Leaving the difficult task of weighing the degree of responsibility, in these cases of offenses against public morals, as a nut for court and jury to crack, we may consider systematically and scientifically at our leisure the individuals who commit them. To the investigation of this class Prof. Krafft-Ebing has devoted years of study, and the work before us is the authorized translation of the seventh German edition. The editor, Prof. Chaddock, has, very judiciously, allowed many sentences in Latin to remain untranslated, so that the grosser forms of vice may not be too graphically portrayed. The work contains brief clinical and autobiographical notes of numerous cases, illustrative of masochism, sadism, psychical hermaphroditism, fetichism, effeminacy, and various forms of libido, furor sexualis, and moral imbecility.

The relationship between lust and cruelty, and the narrow bounds which divide them from insanity, are very clearly shown in the various histories of cases; so that much light is shed upon the commission of crimes which occasionally startle the world by their brutality, such as the Whitechapel murders, which it is now generally acknowledged were the work of a sexual pervert.

As may be understood from the character of the subject discussed in this work, it is not one adapted for general reading, nor will it be conducive to the happiness or moral health of physicians generally to be familiar with its contents. In fact, many will find the topics discussed too distasteful to wish to make its acquaintance. But to the students of psychology, sociology, and psychiatry this text-book will prove of great value. Therapeutically, there is not much to be expected where the patient is mentally and physically degenerate, as most of these cases are; although some have the appearance of robust health, yet they have a neurotic and tainted inheritance with lesions, possibly, which may defy the histologist to detect but which are shown by abnormal acts and eccentric behavior. The gratifying fact is noted that some of these patients have been much benefited by hypnotism and suggestion.

Books received, to be fully noticed in a subsequent issue:

VERLANDLUNGEN DER BERLINER MEDICINISCHEN GESELLSCHAFT AUS DEM GESELLSCHAFTSJAHRE 1892. Herausgegeben von dem Vorstande der Gesellschaft. Band XXIII. Berlin: Gedruckt bei L. Schumacher. 1893.

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MODERN GYNÆCOLOGY: A Treatise on Diseases of Women, comprising the Results of the Latest Investigations and Treatment in this Branch of Medical Science. By Charles H. Bushong, M.D.

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A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By John V. Shoemaker, A.M., M.D.

***

IMPOTENCE AND SEXUAL WEAKNESS IN THE MALE AND FEMALE. By Edward Martin, A.M., M.D. Leisure Library Series.

***

TECHNIQUE D' ÉLECTROTHERAPIE. Vol. I. Editeurs: Drs. G. Gautier and J. Larat. No. 91, Boulevard St. Germain, Paris.

***

DISEASES OF THE RECTUM AND ANUS, THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT. By Chas. B. Kelsey, A.M., M.D.

***

LESSONS IN PHYSICAL DIAGNOSIS. By Alfred L. Loomis, M.D., LL.D.

Notes and News.

Contemplated Postponement of the International Medical Congress.—

From Rome, under date the 1st inst., our own correspondent writes: "I have to make the rather serious announcement that the International Medical Congress, arranged to hold its sittings from Sept. 24th till Oct. 1st, may possibly have to be postponed. No actual decision has yet been taken, but at recent meetings of the Organizing Committee a section of that body was of opinion that 'in sequito alle condizioni sanitarie di alcune regioni d'Europa" (in consequence of the sanitary state of some parts of Europe) it would be advisable to hold the Congress at another season. It was feared that, on account of the 'condizioni sanitarie' referred to, many physicians and health officers whose presence at the sittings was of supreme importance might be unable to attend. The postponement of the Congress would equally involve that of the 'Esposizione Internazionale di Medicina ed Igiene' to be held at the same time. This, as I have said, would be a rather serious step to take, and next week I hope to be able to announce that the fears that have suggested it are so far unfounded and that the postponement in question will not be carried out. Arrangements, like those already completed, of a complicated kind and on a world-wide scale, are not to be lightly set aside, unless by the *force majeure* of exceptionally grave and quite unforeseen circumstances—circumstances which do not seem to have occurred, as yet at least, in any of the great centres of European population. Certainly the full and carefully authenticated reports of the public health of Great Britain and the Continent, given in The Lancet of the 29th ult., furnish no ground for alarm at the 'condizioni sanitarie' of any part of Europe in the immediate present. Meanwhile the 'adesioni' of representatives of foreign medical schools and official sanitary boards continue to reach the Organizing Committee. The University of Madras announces its cordial alacrity to intervene at the Congress, reserving till a future date the name of its delegate. The French Société de la Médecine Légale, whose headquarters are in Paris, has forwarded an announcement to the same effect; whilst the Antwerp Association of Medicine has nominated its representative in the person of Prof. Leroy. The medical school of that city will further have a delegate appointed by the Minister of Public Instruction. Railway and steamboat companies, in addition to those already enumerated, have intimated their readiness to convey the 'Congressisti' to and from Rome at reduced fares; and Signor Martini, the Minister of Public Instruction in the Italian Government, has, in concert with the directors of the national museums and galleries of archæology, sculpture and painting, provided the members of the Congress with special facilities for visiting the same. The excavations now in progress at Pompeii will also be thrown open to members on simply producing their Congress ticket. Considering the maturity that these and a thousand other arrangements for the convenience of the 'Congressisti' have already reached, to say nothing of the fact that delegates from the antipodes are already on the eve of starting for Rome or have adjusted their engagements *ad hoc*, it seems hardly fair to contemplate the postponement referred to, except on grounds of greater gravity and precision than those just indicated."—*London Lancet*, May 6, 1893.

The Victim of Misplaced Confidence.—

One day a bull-dog bit him—he was gamming down Quag nog;
And they filled his brains in Paris with an extract of mad dog.
Then he caught tuberculosis, so they took him to Berlin,
And injected half a gallon of bacilli into him.
Well, his friends were all delighted at the quickness of the cure;
Till he caught the typhoid fever, and speedy death was sure.
Then the doctors with some sewage did inoculate a hen
And injected dilute gastric juice into his abdomen.
But as soon as he recovered, as of course he had to do,
There came along a rattlesnake and bit his thumb in two.
Once again his veins were cut to receive about a gill
Of some serpentine dilution with the venom in it still.
To prepare him for a voyage in an Asiatic sea,

Diluted blood was pumped in him from a leprous
old Chinee.
Soon his appetite had vanished and he could not
eat at all,
So dilute virus of dyspepsia made the last and final
call.
For his blood was so diluted by the remedies he'd
taken,
That one day the poor man died and never did
awaken.
Yet his doctor still could save him, he persistently
maintains,
If he only could inject a little life into his brains.

—*The Corpuscle*, March, 1893.

The Dr. Obetz Case at Ann Arbor.—

The latest reports, May 20th, in this case are that the fight between the two factions of the homœopathic faculty which was given publicity by the presentation of charges against the Dean, Dr. H. L. Obetz, continues to be the absorbing topic among the professors, students, and citizens. The feeling is divided, professors and students taking sides about equally on the question, but the general impression is that the case just made out against Dr. Obetz was not as strong as was expected, and that the regents will refuse eventually to sustain the charges and remove Dean Obetz as requested. A strength was given to the defense of Dr. Obetz and to his plan by a public letter written by the first dean of the Homœopathic College, Dr. Samuel A. Jones, which he gave out for publication this morning (May 20th). The letter contained unqualified support of Dr. Obetz.

The Board of Regents have concluded their May meeting. The charges against Dr. Obetz were referred to the Medical Committee of the Board.

A Prospective Great Medical College.—

Regarding the proposed union of the Chicago medical schools with the Chicago University, the Dean of the University, Dr. Goodspeed, says:

"The University is not prepared to take charge of the matter, on account of lack of sufficient funds for the endowment of such an addition. An effort is being made to interest men of large means in the undertaking, and there is every indication of final success. The University would like a medical school distinctively of the highest grade, greater than any now in America. This would make Chicago the centre of the highest medical learning in this country. The University is more disposed to unite with medical colleges now in existence than to develop an independent one. The purpose would be to elevate the standard, endow the department liberally, and make one powerful high-grade medical school. Medical education should be endowed if a high standard is to be attained."

The New Chief of the Medical Bureau of the Navy.—

The Secretary of the Navy has appointed Medical Inspector J. Rufus Tryon, Surgeon-General of the Navy, to succeed Surgeon-General John Mills Browne, who retired May 10th.

Surgeon-General Tryon was appointed to the navy Sept. 22, 1863, from New York, as assistant surgeon, and has served successively in the grades of passed assistant surgeon, surgeon, and medical inspector. In receiving the promotion to Surgeon-General he skips the grade of medical director, of which there are fourteen on the active list. He comes to the highest rank in his corps with an eminent fitness for the discharge of its responsible duties, and will demonstrate what an energetic, experienced, and capable man can do in the way of enlarging the scope of his bureau and of developing its possibilities.—*Medical Record.*

Sensible Women.—

Berlin ladies have formed a Society for the Discouragement of Trains, and propose to do all in their power to dissuade their sisters from wearing trailing dresses on the street. Their motives are purely sanitarian, for they distinctly avow that they regard the train as a graceful adjunct to evening dress, and they do not wish to see it go out of fashion for indoor use.—*Medical Record*, May 13, 1893.

Another Four-Year School.—

The Woman's Medical College of Pennsylvania has advanced the requirements for graduation to four years. All new matriculants must now take four annual courses of lectures.

Therapeutic Brevities.

The Treatment of Malarial Fever by Helianthus Annuus.—Dr. Moncorvo has been investigating this remedy, made from the plant commonly known as the sunflower, which he has used in the form of a tincture of the flowers and leaves, and of other portions of the plant. The Russian peasants, believing in the value of this plant as a febrifuge, have used the leaves for a bed. A physician of that country, Maminoff, has employed the tincture of the leaves in the case of malarial fever. The observations quoted are sixty-one in number, and the ages vary from one month to twelve years. The dose has varied from 15 drops to 2½ drachms of the tincture, administered every two hours, four or five times daily. The alcoholic extract, which is preferable, is given in the dose of 15 to 90 grains. The remedy has been well borne by children, even by the youngest. In the majority of cases the cure has been as prompt as with quinine, and, in those where the treatment has been regularly carried on, there has been no necessity for the use of this alkaloid, and that, too, in conditions of evident gravity. It appears, then, that quinine can be replaced by this remedy, given in the doses above indicated.—*Les Nouveaux Remèdes*, 1893, No. 1, p. 1 (*American Journal of the Medical Sciences*).

Antiseptic Powder, Improved.—This combines, in what may be called scientific proportions, some of the best antiseptic dusting powders, while the smell has been effectually masked. The formula is, in every 100 parts:

Acid boracic	70
Iodoform	25
Acid salicylic	4
Ol. eucalypti	1

The relative antiseptic value of these constituents is something like this:

Iodoform	10
Salicylic	4
Boracic	0.5
Eucalyptus	0.6

So that, while we have a powder of much less antiseptic value than iodoform itself, we have a mild non-irritating powder, which, tested side by side with iodoform, has given most satisfactory results after an extended trial in surgical wards, and which is likely to be adopted in place of the more expensive article to a large extent.—*B. and C. Druggist* (*The Quarterly Therapeutic Review*, April, 1893).

A New Treatment of Alopecia Areata.—In France the above disease is known by the name of *pelade*, and its parasitic origin is pretty generally accepted. Dr. Pye-Smith opines that many of these cases of *pelade* are in reality examples of ringworm in its later stages. However that may be, the practitioner will be glad to be made acquainted with the most recent treatment in vogue in Dr. Hallopeau's wards at St. Louis Hospital. When the affection is limited in extent, rapid cure is obtained by repeated applications of cantharides solution with daily use of a 90-per-cent. carbolic lotion. Where the disease is more diffused (all the hairy parts of the body or the entire scalp) the following lotion gives good results: Alcohol, 100 grammes; essence of turpentine and camphor, of each 20 grammes; corrosive sublimate, 10 centigrammes. Local patches have been successfully treated by M. Hallopeau by the application of essence of wintergreen, which produces no irritation or pain.—*Lancet* (*Medical Record*, May 6, 1893).

Biborate of Soda in Epilepsy.—This remedy, first recommended in this country by Dr. Gowers, has been subjected to an extended trial by Dr. Mairet. He finds that toxic effects are produced, such as gastric disturbance, œdema of the extremities, loss of hair, conjunctivitis, etc., in nearly all the cases. He recommends small doses to begin with—from 8 to 15 grains daily—gradually increasing to 60 or 70. His maximum dose was from 150 to 180 grains daily, but when the attacks are not affected by 120 grains daily no good is to be obtained from the remedy. After the effective dose has been reached the quantity should be gradually reduced. The mental state he found not to be affected, even with prolonged administration, but he did not consider that the good effects were sufficient to outweigh the disadvantages of the remedy.—*London Lancet*, May 6, 1893.

Ichthyol in Cracked Nipples.—Behren (Revue de Thérapeutique, Jan. 2, 1893) recommends the following formula:

Ichthyol, 4 grammes.	
Wool fat, hydrated,	
Glycerin,	āā 5 grammes.
Olive oil, 1 gramme.	

This ointment is applied to the affected parts. The intolerable pain of nursing is immediately diminished, and the infant continues to nurse with impunity, since the ointment is not irritating, and is easily removed by washing with simple water.—*Quarterly Therapeutic Review*, April, 1893.

Diabetin in Diabetes.—The Wiener Medicinische Presse, No. 14, contains the following report: "At the fifteenth public meeting of the Berlin Balneological Society, held March 10 to 14, 1893, Professor Leyden stated that Jasper's "diabetes pills" did not have any influence on the course of the disease. He had made trials with levulose (Diabetin—Schering), a certain kind of sugar, and found that this product was made use of to more advantage in the human economy than cane-sugar and other carbohydrates, and that the advantageous use was increased with the length of time the article was taken, while for cane-sugar the opposite condition obtains. This result is quite satisfactory, as it proves the feasibility of improving the nutrition of patients with diabetes of medium intensity."

Chloralose.—At a meeting of the Biological Society, M. Féré stated that he had made use of chloralose as a hypnotic in hysterical and choreic patients. He has ascertained that the dose can be increased to 35 grains without accident. Such quantities, however, produce sleep of a peculiar character; the respiration becomes stertorous, and the patient passes urine involuntarily while asleep. In chorea, M. Féré has obtained the same results from chloralose as from chloral. M. Chouppe said that he had also employed chloralose in some cases and had never observed it to occasion any gastric intolerance.—*La Tribune Médicale* (*Medical Bulletin*, May, 1893).

Instrument for Tightening Ligatures.—Dr. Ayers presented a two-bladed instrument which he had devised to take the place of the fingers in tightening ligatures at the bottom of cavities, as in vaginal hysterectomy and in laparotomy for abdominal tumors. He had found it very useful in a case of splenectomy in which he had assisted Dr. Wyeth. Without it traction with the fingers would have been necessary and would have incurred danger.—*American Journal of Obstetrics*, May, 1893.

Allylsulphocarbamide.—Dr. H. von Hebra has employed with success an alcoholic or ethereal solution of allylsulphocarbamide, or thiosinamin, in lupus. It is given hypodermatically, producing a local but not a general reaction. Under the influence of the treatment the cicatricial tissues are said to soften and become flexible, enlarged glands to diminish, and corneal opacities to clear up.—*London Lancet*, May 6, 1893.

Cramps of Cholera.—

℞ Chloral hydrate, ʒ iij.
Morphia sulph., gr. j.
Atropia sulph., gr. ¼.
Aq. chloroformi, } ää ʒ ss.
Aq. destil., }

Sig.: Twenty minims, repeated in ten minutes, and then as needed.

—Bartholow in *Medical Record*, May 13, 1893.

Saline cathartic is useful in diagnosticating intestinal obstruction. If colic is present, it will purge. It may arrest a peritonitis. It will develop and make plain the more serious condition of mechanical obstruction, but must never be given in an undoubted case with the idea of affording relief, for it can only aggravate the condition.—Mudd in *Medical Record*, May 13, 1893.

Local Anæsthesia for Minor Operations.—

	Parts.
Menthol	1
Ether	15
Chloroform	100

Use in spray apparatus.

—Dobisch in *Medical Record*, May 13, 1893.

Gonorrhœa may be aborted by injecting several times a day with a 1:4000 permanganate-of-potash solution through a rubber catheter perforated laterally along its whole extent, the fluid thus bathing the dilated canal.—Jamin in *Medical Record*, May 13, 1893.

Pheneucalyptol, or a solution of from 10 to 20 per cent. of phenic acid and eucalyptol, in vegetable oil, is recommended by Roussel in the treatment of all stages of phthisis. He employs it by superficial injection.—*Medical Record*, May 13, 1893.

Massage of the abdomen, and general massage, is recommended by Eccles in megrim, which he finds always attended with faulty digestion and mal-assimilation.—*Medical Record*, May 13, 1893.

Wine of ipecac has been found by Stillmark effective in inefficient labor pains. Fifteen-drop doses were given.—*Medical Record*, May 13, 1893.

Karbolquecksilberguttaperchapflastermull is applied by Schütz after cauterizing lupus, to prevent disfiguring cicatrix.—*Medical Record*, May 13, 1893.

Medical Progress.

USEFUL MICROBES.—It is well in this age of microbiphobia, when the fear of infection prompts to the complete sterilization of everything eaten and drank, and even the air that is breathed, to have the attention directed to the beneficent rather than the lurid side of the question.

Prof. Albert R. Leeds, in the March number of the American Journal of the Medical Sciences, has done good service in emphasizing the uses of microbes in the economy of nature. The complete removal of bacteria from our drinking-water by filters or any other process of sterilization would, he says, in one sense be a misfortune. Bacteria are nature's physicians, constantly busying themselves in seeing that the decomposing and worn-out particles which would otherwise clog the machinery of nature are gotten out of the way and resolved into their simple and harmless elements. They are universally present: in the air, in the waters under the earth. They dwell with the trout in the waters of the purest mountain torrent, and are found at the bottom of the coldest well. Frequently, in a sample of milk when fresh, he has found hundreds to the teaspoonful, while in the course of a few hours their number has increased to millions. With their aid it is possible to make good cheese; and each one of its peculiar and delicious flavors, from the *pianissimo* of Cottage Cheese and Brie, through the *crescendo* of Stilton, Gorgonzola, and Roquefort, and up to the *fortissimo* of the indescribable Limburger Käse, is due to its peculiar flavor-developing bacteria. The choicest gilt-edged Darlington butter owes its aroma and dainty taste to cream ripened by bacteria under suitable dairy conditions.

The human mouth, stomach, and intestines contain bacteria in immense numbers and variety. There is in saliva an average of more than ten thousand colonies per cubic centimeter. If we assume that a liter of saliva is secreted daily, we shall have the enormous aggregate of over ten million bacteria. Some of the bacteria of the alimentary canal have a peptonizing action, converting the proteids of the food into peptones; others are diastatic, splitting cane sugar into dextrose and lævulose. Some have a reducing action, breaking down all albumin into products of fermentation and putrefactive decay, with the evolution of hydrosulphuric acid and ammonia. They are more especially active and abundant in disordered conditions of digestion. The reducing action of other varieties is exerted upon the fermentable sugars of the food, decomposing them into lactic and carbonic acids. Considering then the peptonizing, soluble-making, reducing actions of these alimentary bacteria, is it not eminently probable that they are intimately concerned in, if not essential to, the processes of digestion?

Unfortunately, among the countless multitudes and species of bacteria which are gardeners *par excellence* in the garden of Nature, working ever towards making it sweet and pure for man's in-dwelling, there are some which are too vigorous and hasty in their action for our immediate safety and comfort. These are the pathogenic, the toxic, the morbific genera, which tend to sweep away or extirpate any poorly nurtured, non-resistant, or diseased organism that comes in their way. Yet they are as abnormal, so to speak, as is disease itself. A thousand samples of milk taken at random will probably not show a single pathogenic bacterium. A thousand springs, wells, and water-courses might readily be found in our vicinity of which the same may be said. But inasmuch as the bacilli of typhoid fever and tuberculosis have been found in diseased cows' milk, the unfortunate recommendation was made to physicians some years since to sterilize all milk by long-continued boiling. Pasteurized milk, which leaves the constituents of the milk in their natural condition, has taken the place of this tortured, overcooked milk, in which scarcely a single element is left in its proper and digestible state. While the Pasteurizing of milk, or its heating for ten to thirty minutes at a temperature of 160° F., does not certainly destroy every germ, it reduces the probability of their presence to a minimum.

So with regard to water: by long-continued boiling, it can be rendered absolutely germ-free. The same result can be obtained by filtration, provided the filtering medium is fine-grained enough and the rate of filtration is sufficiently slow. But with the materials and the methods essential to an economical supply of the immense quantities of water required by our great cities, no process of filtration ever has made, or in the nature of things can make, the filtered water absolutely germ-free and sterile; and even if it could, sterilized water is an artificial commodity of very questionable value. Experience has shown that such water, unless kept in reservoirs as far as possible out of contact with light, heat, and air, spoils very rapidly. As soon as the spores, ever floating in the atmosphere, fall into it, they develop in the

presence of sunlight with great rapidity, and the water so fertilized becomes filled with microscopic organisms, algæ and fungi. These, in their decay and by the production of foul odors and tastes, render the water unfit for domestic uses.

The reduction of the bacteria, as far as can be practically accomplished by filtration, and not to the point of absolute sterility, is all that is necessary or desirable in an engineering plant designed to supply the water for the multifarious uses of a great city. This is, indeed, the system which has proved eminently satisfactory during the last thirty years for the supply of the five and a half millions of inhabitants of London. No epidemic of cholera such as rapidly devastated London prior to the installation of its filter system (comprising 100 acres of filters delivering 160,000,000 gallons daily of filtered water) has occurred since the seven London water companies were compelled in 1852 by act of Parliament to filter their water. In the fifty years prior to the passage of this act, Professor Leeds says there had been four great epidemics, all of which had been traced by such overwhelming evidence to the drinking of unfiltered water that the compulsory installation of the filters ensued. To-day the death rate of London is lower than that of most cities, and the percentage of typhoid fever is correspondingly low.—*Boston Medical and Surgical Journal*, March 16, 1893.

Experimental Researches on the Comparative Absorbing Powers of Stomach and Rectum.—At a recent meeting of the Société de Thérapeutique, reported in the Bulletin Général, M. Main presented, on behalf of himself and M. Lemanski, the result of comparative investigations made, under M. Dujardin-Beaumetz, on the absorption of certain medicaments by the stomach and by the rectum. "One of us," he states, "being pressed for time, we instituted our experiments only with salicylate of sodium, salol, antipyrin, iodide of potassium, terebinthine, and methylene blue. After having determined the integrity of the gastric and renal functions of the subjects under observation, we first administered by the mouth a quantity of the medicament, the dose being adjusted with great precision. Two or three days after every trace of the medicament had disappeared from the urine, we placed in the rectum of the same subject a hollow Kügler suppository containing the same dose of the product."

Taken by the mouth, the salicylate of soda manifested itself in the urine at the end of *thirty-five* minutes; and at the end of *twenty-five* minutes when taken by the rectum.

We were enabled to determine the passage of antipyrin *forty* minutes after stomachal ingestion, and *thirty* minutes after rectal absorption.

We found iodide of potash in the saliva at the end of *fifteen* minutes, giving the medicament by the mouth; and at the end of *ten* minutes, giving it by the rectum. Here we must observe that the rectal administration of iodide of potash is extremely painful, and the subject of the experiment is almost at once forced to expel the suppository. Accordingly less than one gramme (the adopted dose) was absorbed by the rectum.

Methylene blue imparted a coloration to the urine within *forty minutes* after oral administration, and at the end of an *hour ana fifteen minutes* when given per rectum.

Salol, taken by the stomach, manifested itself at the end of *thirty minutes;* taken by the rectum alone, after the lapse of *four hours*. This was to be anticipated, taking it for granted that the salol does not split up in the digestive tube, save under the alkaline influence of the pancreatic juice.

As for the terebinthine, it required *forty-five minutes* to communicate the odor of violets to the urine when administered by the stomach. Given by the rectum, it *never* gave evidence of its characteristic odor.

"One of us," adds M. Main, "had attempted some time previously the employment of suppositories of santal. This product was not absorbed, and produced only an intense rectitis."

From these experiments it follows that all substances may in general be administered by the rectum. Certain products, however, such as the terebinthine and the santal, would not be absorbed.

The speaker added that amongst the products directly soluble, which had been tested, the greater number pass into the circulation more quickly by the rectum than by the mouth. This is a new confirmation of the researches of Demarquay.

In the discussion which followed, M. Patein observed that salol decomposes not only under the influence of the pancreatic juice, but also in the circulation.

M. Main: We simply wished to emphasize the fact that the decomposition of the salol in the rectum must proceed less rapidly, the secretions not being alkaline at the lower end of the digestive tube.

M. Catillon: This question of the alkalinity or acidity of the rectum has been controverted. In the course of investigations which I made at the laboratory of Vulpian on ali-

mentation per rectum—investigations which have been here discussed and which have solved this question—I was led to look into this phenomenon, and very often I found an acid reaction in the rectum.

M. Constantin Paul: I believe the physiological rectum should be alkaline, but I have often determined its acidity in children suffering from green diarrhœa.

THE KEELEY CURE EXPOSED.—In the Medical News of May 6th, Dr. B. D. Evans, of Morris Plains, gives a good many interesting facts regarding the so-called Keeley cure. He quotes the following as being the medicines used:

1.—The Tonic, or "Dope."

℞ Aurii et sodii chlorid., gr. xij.
Strych. nitr., gr. j.
Atrop. sulph., gr. ¼.
Ammon muriat., gr. v.
Aloin, gr. j.
Hydrastinin, gr. ij.
Glycerin, ℥ j.
Fl. ext. cinchonæ comp., ℥ iij.
Fl. ext. coca erythrox., ℥ j.
Aq. dest., ℥ j.

[Dose: One teaspoonful.]

2.—The "Shot," or Injection.

℞ Strych. nitr., gr. $9\frac{1}{10}$.
Aquæ dest., ℥ iv.
Potass. perman., q. s. to color.

[Begin with 5 drops.]

In addition to these two, an injection of a solution of chloride of gold and sodium is used to impress the patient, his attention being called to its rich golden color. Then comes the trick, the hypodermatic injection of apomorphine, which is given with or as a substitute for the "shot" while the patient is allowed to drink whiskey.

He collects reports of 291 cases, among which were 158 relapses and 88 cases of insanity after treatment.

This is not a brilliant record, and is very far from evidencing a sure cure. The charlatanry and commercialism connected with the business are well demonstrated by Dr. Evans. There is no use in denying, however, that the method, apart from this, is a good application of moral and medicinal therapeutics to the various conditions called inebriety. The atropia used is not a very poisonous or harmful drug, neither is strychnia in proper dosage.

The drugs and other agencies employed are none of them new, but they are ingeniously combined. As for the insanity following the cure, it is well known that insanity follows after alcoholism in a great many cases, and it is illogical to attribute it to strychnia and atropia rather than to the alcohol. It is the secrecy, the inhumanity, the indiscriminate dosing of all kinds of people simply for purposes of gain, that calls for reprobation.—*Medical Record*, May 13, 1893.

PERSISTENT CONTINUED FEVER; TREATMENT BY ANTIPURALGOS.—In several cases of persistent continued fever that would not yield to the ordinary antipyretics that have been so popular with the profession, I determined to try the new antipyretic—Antipuralgos—and I am glad to say that in each case prompt and definite action from the remedy was obtained. My patients recovered rapidly, and the remedy acted so charmingly that I was convinced that it possessed real merit and therapeutic properties. Recently I have tested its virtues again in two more cases of continued fever, evidently of malarial origin, where other remedies of a similar character had failed, but where Antipuralgos given in the same way acted admirably. All these cases were conducted to a favorable issue. The use of this remedy was attended by no depressing or unpleasant effects, but it invariably controlled the fever after a reasonable period had elapsed. During the last few days I have had occasion to use Antipuralgos in a case of typhoid fever, and I find that in that case also it reduced the temperature better than any remedy that I have ever tried. This case is also doing well under its administration, and as it progresses I will carefully note effects and at some future time report results.—A. A. Abermathy, M. D., Morristown, Ind.

ANTISEPSIS OF THE DIGESTIVE TRACT.—According to Constantin Paul, saccharin is the best of the buccal antiseptics. As to the question of gastric antisepsis, it has been and is still much neglected. Paul mentions a case of supposed gastric carcinoma with putrid eructations, emaciation, vomiting, offensive stools, and clammy skin. Having no antiseptic remedies available at the time, an infusion of aromatic plants (sage, thyme, etc.) was ordered, and later chloral. A speedy relief of all symptoms followed; and the whole condition was thought to be due to ptomaine absorption, from fermenting stomach-contents.

Another case is mentioned of actual gastric cancer in which lavage with chloral solutions seemed to render the condition stationary.—*Le Courier Médicale*, Dec. 10, 1892.

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Original Articles.

THE ERLENMEYER TREATMENT OF THE MORPHINE HABIT.

BY E. P. HURD, M.D.

I have formerly reported in this journal* cases of morphinomania treated by me in accordance with Erlenmeyer's rapid method, as detailed in the little book entitled "Treatment of the Morphine Habit" and published in the Leisure Library Series. I am still convinced that this is a very satisfactory method of treatment, and I cannot well understand how it can be much improved upon. The method contemplates and seriously attempts the entire withdrawal of morphine in about a week, the daily dose being first cut down one-fifth, then two-fifths, then three-fifths, then four-fifths, and so on till none is given. During the period of withdrawal, the place of the morphine is supplied by various stimulants, narcotics, and hypnotics. It may be necessary during the first week to give large quantities of whiskey, almost to intoxication. Chloral and sulphonal in large doses, quinine, and strychnia will also be needed to meet indications. After the last dose of morphine has been given, the patient will be in a condition of great depression, and powerful stimulation will be required for a few days; sometimes diarrhœa or collapse will indicate the necessity of a temporary resort to morphine again, or to deodorized laudanum. Then, when the patient is sufficiently weaned from morphine, the task is begun of weaning him from the drugs and from the alcohol by a tapering-off plan, which will require about three weeks. Naturally, it is a month of anxiety and watchfulness to the physician, and of trial and suffering to the patient, who needs great force of will to persevere to the end.

I have, since my last article on "Morphinomania" in this journal, had the care of a medical gentleman from the far West, who came into Newburyport Hospital Nov. 1, 1892, and who went home cured about the second week in December. This gentleman had for seven years been addicted to the morphine habit, using daily on an average about 15 grains. In one week after the beginning of the withdrawal treatment, he took his last dose of morphine (a subcutaneous injection of one-fourth grain). In ten days the worst of the misery attending the withdrawal was over. I fully believe his statement that he is to-day emancipated from the terrible habit.

Dr. J. B. Mattison, of Brooklyn, N. Y., who has, I believe, been very successful in the treatment of the morphine habit, has denounced the Erlenmeyer method as *cruel and severe*. He claims that his method—called the Mattison method—"is the most advanced yet presented," preëminently an "American and humane plan."

I have not seen Dr. Mattison's pamphlet, and do not know what his method is. If he has invented any improvement over the system of treatment formulated by Erlenmeyer, I, for one, shall welcome it as a boon to humanity. The number of morphinists is doubtless on the increase, and there seems to be an especial tendency on the part of physicians to fall into this deplorable vice. At the meeting of the Paris Therapeutical Society, held March 8, 1893, Dr. Grillety called particular attention to the frightful progress made by morphinomania among members of the medical profession, and gave some facts that are quite startling. Dr. Grillety advocates the withdrawal of the morphine "as quickly as it can be done with safety."

I observe that the recent book of Chambard "On the Treatment of Morphinomania (Charcot-Debove series, Paris, France) commends the Erlenmeyer method as possessing advantages over all others. It is well understood that for the poor morphinomaniac there is no royal road to sanity of body and mind,

*MEDICAL AGE, Feb. 25, 1892.

to full self-control, to emancipation from his deplorable habit; and that by whatever method he attempts to free himself from his yoke of bondage, there must be a season of poignant suffering.

Hence it is generally preferable that the patient be in an institute where restraint can be exercised, and where he can even be confined for a time as a prisoner. There are few victims of the morphine habit who, like the case which I have reported, have the self-control to go through the withdrawal period in a private house, or even in a public hospital, and under any method of treatment there are few permanent cures.

CITRULLIN SUPPOSITORIES.

BY DR. G. ARCHIE STOCKWELL.

A new addition to the armamentarium therapeuticum, for which we are indebted to the enterprise of Messrs. Parke, Davis & Co., is had in Citrullin Suppositories—Citrullin, as is well known, is one of the active principles of *Citrullus Colocynthis*. These will practically supersede for many purposes the especially popular Glycerin Suppositories, for the following reasons:

1. Citrullin is distinguished from glycerin in its action upon the intestinal tract in that the catharsis induced is not, like the latter, the result of topical and acrid operation, but of a specific influence upon the prima viæ. Citrullin is stimulant to abdominal and pelvic vessels and nerves in a state of torpor and inactivity. Further, in habitual constipation, it may be taken indefinitely—may be even employed for years without the patient suffering any inconvenience whatever.

2. Citrullin stands very high among cholagogues; it renders the bile more watery, and, at the same time also increases the solid constituents. Again, while it is generally stimulant to all abdominal organs, it is specially so to intestinal glands; it likewise accelerates vermicular movements; and even the kidneys are led to participate to some degree in the general stimulative effect.

3. Citrullin operates *mildly*, *certainly*, and *effectually*, when employed by enema. Indeed, all the effects that can be obtained by administration *per os* are also, and oftentimes more satisfactorily, obtained when the recta mode of application is employed.

4. Citrullin will produce alvine evacuation when ordinary purgatives, given by mouth fail owing to being vomited up. Doubtful cases of intus-susception, and even hernia with stercoraceous vomiting, may be completely relieved thereby; more than once by this means, the writer has averted an operation for hernia when the latter threatened strangulation. It may be readily conceived also, that the Citrullin Suppository has a most important place in the treatment of inflammatory conditions of the abdominal area and especially in the relief of peritonitis.

Glycerin Suppositories, as already suggested, act chiefly by osmosis—through the affinity of the chief ingredient for the fluids of the tissues; thus they are largely local in effect, and certainly are not to be depended upon to relieve portions of the alimentary tract other than those bounded by the limits of the large intestine. Citrullin Suppositories, on the contrary, are active as far as the pyloric orifice of the stomach—may even in some degree affect the stomach itself. The active ingredient, the Citrullin, is rapidly absorbed, and its physiological action speedily manifested—not alone as a cathartic stimulant, but as a stimulant of hepatic and duodenal secretion. Another special condition is that even in aperient doses its action is not wholly local—is not dependent upon the power of depleting the tissues of local fluids but upon the general stimulation of the glandular area of the intestines; and, moreover, the result attained is not followed by the drawback of an increased or more persistent constipation. In other words, the action of Citrullin is physiological, and not mechanical. Where constipation is merely a local effect and the result of sedentary habits, long sitting at desk, etc., with impaction or retention of fæces "in recto," the Glycerin Suppositories will, many times, be preferred, since the desired result is immediately attained and terminates usually with a single, profuse passage; Citrullin, however, on the contrary, has an effect that is farther reaching and more lasting, since it oftentimes happens that the bowels are regular for two or three days after a single dose, as the result of its

stimulation of abdominal glands—the persistence of its physiological activity.

The writer has employed Citrullin Suppositories on a number of occasions, not alone for himself individually, but for other members of his family, with the most happy and agreeable results.

Dr. Whitman V. White, Fifty-sixth street, New York City, who is also physician to the Female Asylum for the Insane, on Blackwell's Island, reports the satisfaction accruing to not only himself but the entire staff of this Institution, from the use of these Suppositories. He also cites specially the following cases in private practice:

"*Case 1.*—Mrs. H. N——; æt. 36; nativity, United States; married. Has been a victim of constipation for ten years; have treated her for this trouble for the last three years with indifferent success. She abandoned taking medicine, and was compelled to resort to enemas of water daily in order to provoke movement of the bowels.

"On March 10th, I gave her six Citrullin Suppositories. The same night she applied one. Her bowels were moved before morning; twice during the succeeding day, and once on the day following. Her bowels were kept in excellent condition so long as she had suppositories, and she is now awaiting another supply.

"*Case 2.*—Mrs. F. G——; æt. 40; nativity, England; married. Had an attack of icterus; bowels sluggish from suppressed liver function. Pill Fel Bovis with Colocynth was ordered, which did very well for a few days, when the stomach became intolerant. I prescribed Citrullin Suppositories, and after the use of half-a-dozen—at first one every night, later, one every second night—the bowels became normal. She now experiences no trouble in this direction. She will be pleased to have more at hand to employ in case constipation should return.

"*Case 3.*—Mrs. M. H——; æt. 72; nativity, U. S.; widow. Has suffered from constipation for years, which is probably due to senility; has resorted to every known means of keeping the bowels in motion. The use of Citrullin Suppositories has given her more relief than anything she has heretofore employed. She is awaiting another supply.

Case 4.—H. M——; æt. 40; nativity, U. S.; single. Has had a general stasis for several years; his bowels have assumed the same general indolent condition; the use of Citrullin Suppositories for ten successive nights had the effect of general stimulation. His steps became lighter and quicker, especially in the morning; his family tell me this is the first thing that has ever given him relief from constipation.

"I am watching the use of these Suppositories at the Female Insane Asylum, on Blackwell's Island, with great pleasure."

GONORRHŒA OF THE RECTUM.

BY F. BYRON ROBINSON, B.S., M.D.

For several years I have written and talked in what my medical friends called a radical way in regard to the extensive existence of gonorrhœa. Over three years ago I insisted that gonorrhœa was sometimes the cause of spermatocystitis or vesiculitis in males. This conclusion was from original investigation, done on the vesiculæ seminales of the bull and boar, and also on the cadavers in the Toledo Medical College dissecting-room. At that time (1890) I could find no investigations on the subject, but I was sure that gonorrhœa caused trouble in the vesiculæ seminales. Early in 1891 I met Mr. Jordan Lloyd, of Birmingham, England, while a pupil of Mr. Lawson Tait. Mr. Lloyd told me he was working then on the same subject, and that I was the first man whom he had met who had studied the semen sacs in regard to gonorrhœa. At that time I had dissected quite a number of vesiculæ seminales in different mammals and man.

I published several short articles, but heard nothing from them until May, 1892, when I came across a typical case and published it in the Medical News. Since that time I have seen references to the article as probably coming near the truth. Others have also related cases.

I now have another idea of a similar kind, which I believe will eventually be recognized as a fact. The idea is that gonorrhœa causes stricture of the rectum. I can so far find no reference to the subject in literature.

In the first place, the gonococcus thrives

best in cylindrical epithelium. It remains long in that kind of epithelium which has luxuriant folds, as in the fallopian tubes, or the cervix, or the closed glands of Bartholini. It will in some manner linger in the male generative organs for years. The gonococcus will infect the conjunctiva in the eye, and leave destructive traces. In just the same way it will attack the mucous membrane of the rectum. The gonococcus will destroy the epithelium of the rectum, and pave the way for an ulcer or abraded surface.

The male urethra suffers from stricture resulting from gonorrhœa. The rectum is rich in cylindrical epithelium, and it is moderately easy for the rectum to become infected in the female by the gonococcus. The follicles of Lieberkühn, which are lined with typical cylindrical epithelium, are the most secure location possible for quiet growth. The disease germ could lie at the bottom of the follicle, and not be swept out by the fæcal currents. As the gonococcus denuded the epithelium of the Lieberkühn follicles it would form a substantial base for subsequent stricture. Females are the most liable to become infected in the rectum by gonorrhœa. It is estimated that females have stricture of the rectum some ten times as frequently as males.

I was still more confirmed in my opinion that gonorrhœa causes rectal stricture in females, when a few days ago I had a conversation with Dr. Joseph B. Bacon, Professor of Rectal Diseases in the Chicago Post-Graduate School, and I learned that he believed that gonorrhœa induces these rectal strictures in females. In fact, I learned that Dr. Bacon was beginning, in his lectures, to advocate the view that gonorrhœa may cause rectal strictures.

The more we pay attention to rectal diseases in gynæcology, the better it will be for some of our patients. If a woman has gonorrhœa, the rectum could easily become infected from the profuse discharge, especially as she lay on her back. The rectal specialists have a wide field to collect facts to prove or disprove the theory.

I have been convinced for some time that gonorrhœa might result in rectal stricture, and I was pleased to note that Dr. Bacon shared similar views, as he is the first rectal specialist to my knowledge who does. More observation and investigation will be required to bring out definite proof of the theory.

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HEADACHES—THEIR PATHOLOGY AND TREATMENT.*

BY FRANK PARSONS NORBURY, M.D.†

In the clinical study of headaches we are confronted with problems of great complexity; for, as they are rather symptoms of disease than the disease itself, we recognize that the nature of the pain does not necessarily indicate its cause, and that the real cause can only be discovered by thoroughness of study of each individual case.

Primarily headaches can be classified as *Organic* and *Functional*.

Organic headache is caused by structural disease of the brain or its membranes, and is characterized by persistency and intervals of marked increase, together with motor and sensory involvement of certain nerves. In some cases, localization of the pain is possible, as in certain cases of cerebral abscess and in syphilitic brain disease. Dana has prepared an excellent diagram, showing approximately the localization of pain in headaches from various causes, which for practical purposes may be assumed to be correct. It is to be found in his recent valuable Text-book of Nervous Diseases.

In organic brain disease, I have repeatedly noticed localized headaches; and while not being able to localize the lesion entirely thereby, because the pain and the location of the lesion do not necessarily correspond, yet this symptom assisted me in confirming the diagnosis of structural change in the brain. In two cases of cerebral abscess and one of tumor the localized headache and the lesion corresponded.

The headache of syphilis seems to me to have some characteristics of its own, although Wood says "there is nothing absolutely characteristic in the headache of syphilis."

* Read before the District Medical Society of Central Illinois, at Pana, Ill., April 25, 1893.

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The nocturnal exacerbations, the persistency, the localized pain, generally limited to one side of the head or the forehead, together with the vertigo and the mental disturbances, are, I believe, marked characteristics of syphilitic brain disease.

Gray says: "The headache of syphilis is peculiar in having a *quasi*-periodicity, that manifests itself in a tendency to return at a certain time in the twenty-four hours, most frequently at or toward night, less frequently in the afternoon or morning."

Hamilton looks upon headaches with attendant stuporous symptoms or vertigo as suspicious of syphilis.

In general paralysis of the insane we frequently notice the localized headache, and in the early stages it has diagnostic value when, as Sander says, "in the fourth decade of life, without a precedent history, either personal or hereditary, such headache develops" (Gray).

The headache of meningitis, acute or subacute, may be intense and is general; in chronic meningitis it is of low grade, and constant, and may persist for years. Nothnagel describes, according to Hamilton, a characteristic pulse in meningitis, viz., "irregular, and when there is irritation of the pneumogastric, as in basilar disease, there is periodical acceleration."

I have seen several (and now have under my care three) cases of persistent headache due to chronic meningitis, and many of them are subject to exacerbations at irregular intervals. One of my cases is unusually confused mentally during these exacerbations, and then develops hallucinations of sight which apparently are not present during his quieter periods.

A case recently of lepto-meningitis—which diagnosis was confirmed by post-mortem examination—displayed delusions of grandeur and other mental symptoms more characteristic of general paresis than of meningitis. Headache was more or less persistent in his case.

Functional Headaches.—They may, for convenience, be considered according to the classification of Wood, which is as follows: Toxæmic headaches, due to poisons either produced within the body or received from without it; Sympathetic headaches, due to some peripheral lesion; headaches which are not included in other groups, and to which the name of Nervous may be given, with the understanding that the title carries no etiological significance—in this group are placed many headaches of whose ultimate cause we are ignorant.

The headaches due to toxic influences are numerous and are dependent upon blood changes. The lithæmic headaches are probably the most severe of this form, the retained nitrogenous substances being responsible for the severity of the symptoms. Headache may be due to malarial poisoning, as anyone living in a malarial district well knows. I have repeatedly seen severe cases of migraine relieved by anti-malarial treatment. Then we notice the rheumatic headaches, the headaches of uræmic poisoning, of lead poisoning, of inhalations of poisonous fumes or gases, and those following the use of tobacco, alcohol, coffee, and tea—all due to the blood changes incident to the special poisons.

Sympathetic headaches have not, until late years, received the attention they deserve, and even now they are tabooed in some quarters. The headache of eye-strain is established, and even though some physicians have become decidedly enthusiastic over the correction of errors of refraction and muscular insufficiency, so as to make themselves subject to severe criticism, yet to these same observers we are indebted for the really valuable knowledge we have of sympathetic headaches.

Walton and Carter, in an interesting paper on "Eye-Strain and Headache," say: "In our practice, after eliminating syphilis, toxic influences, and organic brain disease, an ophthalmological investigation is the first thought that suggests itself in every case of long-standing headache; and the result has generally more than justified the investigation."

Astigmatism, especially compound myopic, is responsible for most of the sympathetic headache of eye-strain, but other errors have causative value as well, for Mittendorf says that in 1,000 cases of errors of refraction, with headache, studied by him, 83 per cent. were cases of astigmatism, 11 per cent. cases of hypermetropia, and 2 per cent. cases of

myopia; nearly seven hundred cases had hypermetropic astigmatism. My experience, while limited, suggests compound myopic astigmatism as causing the most painful and persistent headaches. Probably, as I am myself such a subject, is the reason I give such importance to this error of refraction. The headache of eye strain is usually located in the frontal region, although occipital headache is to be noted. Then we may find both combined, and only one of which will be relieved by properly adjusted glasses.

Mitchell has pointed out that we may have a patient subject to two or three kinds of headache. A patient now under my care has compound myopic astigmatism producing frontal headache, and a more or less permanent vertex headache due to reflex uterine symptoms. Mitchell has further called attention to the fact that there are cases whose corrected error of refraction cannot be wholly endured, and so we must approach complete correction as near as possible compatible with relief.

Other reflex or sympathetic headaches are to be noticed following caries of the teeth; these headaches are oftentimes severe and perplexing. Caries of the teeth may exist and no headache result; but in all cases having severe headache and carious teeth, as a mere matter of routine the teeth should be treated.

Nasal disease may cause headache, according to Harrison Allen, Roe, and others.

Then the sympathetic headaches incident to stomach and intestinal derangements, diseases of the pelvic and sexual organs, are of diagnostic importance and can in many instances be localized.

Wood says that under the title of nervous headaches may be grouped anæmic, congestive, headache of brain exhaustion, hysterical and idiopathic headaches, and migraine.

The headaches of anæmia are of great significance, especially in the busy housewife and mother who has a large family to care for. The pain, usually localized at the vertex at the start, may soon involve the entire head, and is characterized by feeling of fullness, dullness, and discomfort. The headache of neurasthenia resembles it very much; the symptoms are almost identical, and differ only in the fact that all cases of neurasthenia are not anæmic, while most cases of anæmia are neurasthenic. Acute exacerbations of pain may occur while the interesting mental symptoms of fatigue, so graphically described by Cowles in a recent number of the New York Medical Journal, are present.

The hyperæmic or congestive headache is marked by throbbing, pulsating pains, usually increased on lying down; they are sometimes periodical, especially in women when they accompany dysmenorrhœa. In men we find the plethoric and those leading sedentary lives, subject to congestive headaches. Over-indulgence in eating is an exciting cause, likewise overheating or physical exertion, and frequently in violent fits of coughing it is noticed. The congestive headaches of nasal catarrh are common in this climate of ours.

The headaches of hysteria are often permanent, unless we direct our attention to the care of the hysteria and let the headache, *per se*, alone. Mitchell says he has corrected errors of refraction, lithæmia, etc., and still the headaches would continue, but as soon as he recognized the hysterical element he could more rationally treat the case. The clavus, so-called, is a special symptom of hysterical headache.

The most distressing and difficult to treat of nervous derangements associated with headache, is migraine, or sick-headache; the paroxysmal attacks lasting from a few hours to a whole day, and characterized by unilateral pain; preceded by distinct prodromes, such as malaise or depression, lasting from a few hours to a day or two. During the continuance of the pain, other nervous disturbances occur, such as ocular symptoms, flashes of light or bright spots, or both, floating before the eyes; hallucinations of sight and of hearing; noises, such as the discharge of fireworks or guns, being heard. There are disturbances of sensation: hemianæsthesia, or numbness of an extremity commencing at the fingers and gradually extending up to the neck, or may involve both leg and arm. At the climax there is vertigo, nausea, and vomiting, after which some depression or exhaustion is experienced; the patient falls asleep, and awakens after a few hours refreshed.

I now have a patient under my care presenting the typical symptoms of migraine:

A young man, aged 22; blacksmith helper by occupation; he has been troubled since puberty with paroxysms of migraine; he usually has four or five severe attacks during the year, and with several milder forms at irregular intervals. He has a neurotic family history; one brother, who is an epileptic, is insane, and his father suffers with neuralgia. The patient has been told by several physicians that he has epilepsy. He consulted me a few weeks ago, and I found his case one of true migraine. In making my diagnosis I did not lose sight of the association between migraine and epilepsy (the conditions being more or less allied), but the symptoms in this case indicate it is migraineous rather than epileptic in character. He experiences chilliness, and depression on arising in the morning of the day preceding an attack, and is attended with feelings of discomfort in donig his work; slight numbness is experienced in his fingers, and spots are seen before the eyes, with now and then "a shower of stars;" he has no appetite, feels languid, and is constipated; he usually goes to bed at this stage of the attack. The numbness increases in the hand, then the arm, and finally the neck; then the headache located on the opposite side of the head increases in severity until he can no longer talk, noises are heard, he is dizzy and becomes quite nauseated; he then vomits, usually two or three times, perspires freely, passes more than the usual quantity of urine, and then goes to sleep. After four to eight hour he awakes, feeling refreshed, and excepting for the weakness he says "he would be all right."

Some cases of migraine suffer from anæmia, insomnia, neuralgia, constipation, and other nervous derangements. All require special study to elicit the individual symptoms.

The headaches of childhood should receive special mention, for those of you who have had to deal with nervous children know how persistent, indeed, may be these headaches. Early recognition of such headaches makes possible relief from years of suffering, if due importance of treatment is appreciated.

The headaches of childhood are much the same as in adults. Simon has classified seven groups, which are: The headaches of growth; of mental strain; of digestive disturbance; the nervous headaches, from which group are recruited the future neurasthenics, epileptics, and hysterics; the rheumatic and gouty headaches; the headaches of anæmia and intoxication; and lastly the sympathetic or reflex headache.

In brief, we have reviewed the various clinical groups of headaches ordinarily encountered in practice, aside from those of fever, etc, which properly belong to groups we have considered but not specially mentioned by us.

Pathology.—The pathology of headache is unsatisfactory, yet interesting. It is an early symptom of disease, and a recognition of its cause will avert disastrous calamities to the mind and the nervous system. True headache is to be distinguished from migraine in this consideration, for migraine is in itself a nervous disease and not necessarily a symptom.

Headache, in other than organic disease of the brain, is not due to pressure or destruction of nerve tissue, but is, no doubt, principally due to circulatory changes, either in the condition of the blood itself or of the vessels.

In the organic disease of the brain—general paralysis—in its early stages, headache is circulatory, or rather vaso-motor, in origin, and is a warning which if heeded may prevent the loss of mind and body of an individual.

General paralysis is, I believe, amenable to treatment in this stage; and, gentlemen, I urge upon you to do what you can to avert the second stage, which leads to inevitable death. Take the headache as a warning signal for quick, active treatment.

Most headaches are warnings, if we would but so regard them. Take the headaches of anæmia and neurasthenia, where tissue-waste has become pathological: headache warns us of the danger of graver consequences and disasters; it shows there is not time enough given for repair, or that the machinery is so out of repair as to require new material to make possible the generation of nerve force. The nerve cells need new blood to replenish their wear and tear, or else time enough is not given to get the old worn and used material out of the way, so as to permit free action. The result is, we have

toxic products interfering, *first*, with assimilation, osmosis being hindered; *second*, by weakening of the cells, prohibiting them from doing their usual work. As Cowles says: "From the gradually failing elimination, the local inanition may become more general, and the first results are an increased excitability from weakened resistance and inhibition, with a quick exhaustion of the nervous system under exercise."

The headaches of toxic origin we will find to be a pathological problem; the pain "is deep-seated and often intense, and is supposed to be in the dura mater."

Seguin says the thorough study of a case of headache is one of the most difficult problems in medicine. Usually it is investigated in a superficial and unscientific manner, and the physician often allows himself to be biased by the patient's opening statement that he has "neuralgia." In our study of headaches we too often ignore what pathology is ascertainable, and treat them all alike. Each headache has a pathology, and it is our business to find it out if we can, and no stone should be left unturned that will help us in studying our case.

We must not confuse the neuralgias with headaches, but carefully differentiate what we have to treat.

In migraine we have no definite pathology, yet believe the seat of the disease is in the intracranial branches of the fifth nerve. Dana says: "The most plausible theory is, it is a fulgurating neurosis, in which there are periodical discharges of nerve force, or nerve storms. The seat of the discharge is perhaps in the cerebral cortex, but more likely in the primary sensory centres, *i. e.*, the root ganglia of the fifth and vagus nerves." The disease is certainly not in the sympathetic system, as was once taught. The only truly sympathetic headaches are the reflex headaches from eye-strain, ear disease, and disorders of the digestive tract and sexual and pelvic organs, etc.

Treatment.—It is well to remember at the outset that each case of headache is "a law unto itself," as I have so often reiterated in this paper; and while we may lay down certain general principles regarding the therapeutics of headache, we cannot give specific details; more exact knowledge as regards treatment must be gathered by studying each case. We hear of "specifics," and with the advent of the coal-tar products has come a line of headache remedies, proprietary and otherwise, displayed in all drug stores, and samples of which are sent physicians, such as would make us believe the days of headache were over; whereas these so-called specifics are sowing seeds of nervous disturbances which ere long will reap a whirlwind of disaster. At best they can only serve to ease the pain or lessen its intensity—they cannot remove the cause.

Treatment should be based on etiology, and it is just here where the abuse of headache remedies comes in. A patient suffering with headache, irrespective of cause, goes to a druggist ignorant of the indications for treatment, and is given "Headine" or "Dr. Wondrous Wise's Headache Powders." Relief follows; but as treatment is not based on cause, nothing is done to remove it, and as the headache returns the anodyne or analgesic is repeated. The dose of the remedy is increased, and still the headache returns, until at last prolonged use of the remedy has added fuel to the original flame, and great disturbance of innervation is the result. I know of a case taking as much as an ounce of antipyrin in twenty-four hours. She is a confirmed antipyrin *habitué*, and nothing has ever been done to find the cause of her headache. We all know that proper regulation of diet, of digestion, etc., corrects many headaches; that habits are responsible for much of the headaches; that overwork, loss of sleep, produce brain tire and consequent headaches; that climatic conditions may be responsible for certain headaches; that poor ventilation, over-eating, excesses, and a host of other preventable causes of headache, require in the line of therapeutics more common sense than medicine.

Our special therapeutics applies especially to the treatment of the attack and then the removal of its cause. Gray says it should be laid down as an axiom, "That a headache must be controlled," the pain must be relieved, and the best drugs are opium, cannabis indica, antipyrin, phenacetin, and the bromides.

We recognize the danger of opium in the cases of recurrent headaches, and hence we must be cautious, especially in the use of

morphine; but we are justified in its use under certain circumstances.

Cannabis indica is of great value in the treatment of headaches, and I am disposed to accord it first place in the treatment of an acute attack. It is a safe remedy and a reliable one. Mattison has shown its value as a sedative and anodyne, and that we are too liable to give small doses rather than enough to get a decided effect. Large doses are indicated; they are safe, as there is not a recorded case of death from the use of the drug. I perhaps stand alone in placing cannabis indica in the front rank, but my experience justifies it.

Antipyrin and phenacetin are good remedies for an acute attack, but must be watched. I prefer phenacetin, and give small doses frequently repeated until 20 or 30 grains have been given; it is not safe to go beyond this limit. Antipyrin has produced alarming symptoms in two cases I have used it in, and consequently I am somewhat afraid of it.

The bromides are, perhaps, more universally used than all other remedies; we have them put up in effervescing preparations, sometimes combined with caffeine or antipyrin. Then the combination of the bromides alone is used extensively.

We must endeavor to give relief to the attack, and during the interval ascertain the cause if possible. We cannot expect to stop the headaches all at once, but must be content in reducing the frequency of attacks and preparing our patient to resist them by improving the physical health and removing such conditions of ill-health as will predispose to an attack.

Prolonged rest treatment is indicated in headaches of neurasthenia and anæmia; correction of reflex irritation in sympathetic headaches; and careful elimination of toxic conditions in the toxæmic headaches.

Migraine will especially try our patience in its treatment. We must first insist upon a well regulated and orderly life, viz., attention to diet, rest, recreation, and general physical health. Easily digested food is and should be recommended; abstinence from stimulating diet is imperative. Proper regulation of the bowels is important. During the intervals we need tonic treatment and likewise the use of nervines. Sinkler has combined these in pill form—an excellent prescription. I have modified the quantity of cannabis indica, and have used the triturate in preference to the pill.

Parke, Davis & Co. have recently made me triturates of the following formula of Sinkler, with my modification:

℞ Extract cannabis indica, gr. ¼.
Arsenious acid, gr. $\frac{1}{60}$.
Iron by hydrogen, gr. j.

One triturate is given three times a day, gradually increasing to two or three, three times a day. Cannabis indica is the best drug in the treatment of migraine, and is a safe remedy. We may note some peculiar symptoms following its administration, but they are not necessarily alarming. Tolerance to the use of the drug is established without much disturbance. I have noticed delirium and rather excited talk in cases, but this soon passes away. We must continue its use for months, together with insistence upon a regulated life.

For constipation I use the aloin, belladonna, and strychnia pill, one at bedtime. Where there is digestive disturbance it should be carefully investigated, "chemical dyspepsia" being specially corrected.

Electricity, for its tonic effect, likewise baths, exercise, and carefully regulated sleep, are of prime importance as adjuvants in treatment.

REFERENCES.

Allen, Harrison, Medical News, Jan. 30, 1886.

Brubaker, A. P., Therapeutic Gazette, January, 1888.

Bridge, Norman, Reference Hand-book of the Medical Sciences, 1886.

Cowles, Edward, New York Medical Journal, April 1, 1893.

Dana, C. L., Medical Record, Feb. 9, 1889; Textbook of Nervous Diseases, 1893.

Dercum, Francis, University Medical Magazine, April, 1891.

Gray, Laudon Carter, Nervous and Mental Diseases, 1893.

Hamilton, Allen McLane, Treatment of Headaches, 1890.

Hirt, Ludwig, Diseases of the Nervous System, 1893.

Mattison, J. B., Brooklyn Medical Journal, November, 1891; Universal Medical Journal, February, 1893.

Mitchell, Weir, International Clinics, October, 1891; Nervous Diseases, 1885.

Sinkler, Wharton, Hare's System of Therapeutics, vol. iii.

Seguin, E. C., Keating's Encyclopedia of Diseases of Children, vol. iv, 1891.

Simon, Jules, Therapeutic Gazette, July, 1891.

Walter, G. C., and Carter, C. F., Medical News, March 19, 1892.

Wood, H. C., Nervous Syphilis, Pepper's American Text-book of Medicine, vol. i, 1893.

THE TREATMENT OF THE GOUTY STATE*

BY FRANK WOODBURY, M.D.†

Gouty patients should pay especial attention to the condition of the skin, and should avoid such exposure as would lead to chilling the surface and producing internal congestions. Great care should also be taken to keep the stomach in a normal condition, avoiding excess of eating or drinking, and all articles which are known to cause fermentation and flatulence. Occasional cholagogue purges are useful, especially with colchicum preparations, but too frequent purgation is debilitating and therefore to be avoided. The kidney secretion must be watched, and the appearance of a brick-dust deposit should be regarded as a cautionary signal, to indicate either a deficiency of oxygen, hepatic failure, errors of diet, or all combined. The occurrence of albuminuria should lead to the institution of proper measures to prevent the development of renal congestion or degeneration (gouty kidney).

Among the most important means of treating the gouty state is the persistent use of a good natural lithia water, which may be used at the table and at other times. As pointed out by Sir Henry Thompson, the artificial mineral waters or solutions of salts are less efficient therapeutically than waters from Nature's laboratory. Many mineral waters are offered to the public for lithæmic conditions, whose only therapeutic value resides in the water they contain. Trousseau, indeed, cautions against an excess of water-drinking by gouty subjects as being injurious and likely to intensify the symptoms. This is more likely to occur where the kidneys have been structurally altered by the disease and therefore have their functional activity more or less reduced. Lithia is on chemical grounds considered the most useful of the alkali remedies, because it forms more soluble salts with uric acid than any other base. It is not clear, however, why uric acid should combine with the lithia salts in the presence of sodium carbonates in the blood, when as a rule the base which forms the insoluble salt is considered to have a stronger affinity for an acid than one which combines with it and remains in solution. I mention this because I am not willing to concede all the good results from such a water, for instance, as the well known Buffalo lithia water, to the presence of the lithia, any more than I would be to ascribe it entirely to the pure water which it contains. The fact is that experience has abundantly shown that the good effects of the natural lithia water are to be ascribed to the peculiar combination of salts, just as in drug-prescribing we obtain special effects by combining our remedies. It is gratifying to witness the good effects of the daily use of four or five glasses of the Buffalo lithia water in relieving the usual symptoms of lithæmia, or even in removing the more severe condition of gravel or uric acid deposits. At the same time, I do not wish to be misunderstood. I think that at the present day there is danger of our taking too narrow a view of the pathology of gout, and to sum it up as simply uricæmia or lithæmia (lithiasis of Fothergill), or an increased amount of uric acid in the system. This is an unfortunate error. Uric acid is not the cause of gout; *it is the gout, on the contrary, which causes the excess of uric acid.* In other words, the gouty diathesis or condition is that in which there is a tendency to increased formation of uric acid, and also of oxalates, and it is accompanied by other well-marked pathological occurrences which complete the clinical picture. In several other disorders we have as great or even greater development of uric acid in the blood without the typical and classical tissue changes of podagra, and in gout the amount of uric acid is not the sole measure of the intensity of the gouty manifestations. The nervous phenomena of gout must not be overlooked; and the fact that heredity plays such an im

* A clinical lecture.

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portant part in its production, and its well recognized diathetic character, give much support to the view of the essentially nervous character of the disease.

Sir William Roberts has, in a recent lecture, shown that in non-gouty subjects the uric acid exists in the blood in the form of the soluble quadrurates, while in gouty patients it exists in the less soluble form of bi-urates; the sodium bi-urate being particularly insoluble. Where this sodium bi-urate is in process of deposition in the form of tophi in the parenchyma of organs like the kidneys, in the articular surfaces of joints, and around them, and in the pinnæ of the ears, it is conceivable that a remedy like piperazin, which exercises an extraordinary solvent effect upon the urates, might be useful for a rapid effect. But a rational treatment would be to shut off the supplies of soda and to diminish its total quantity in the blood. Acting upon this, Dr. Roberts has for years been in the habit of advising his gouty patients to restrict the use of salt with their meals, especially since table salt, or sodium chloride, in solution has the power to precipitate sodium bi-urate and increase the deposits in the joints. It is worth noting that butcher's meat contains considerable proportions of chloride of sodium, while salt or pickled meat or fish is especially objectionable. Jonathan Hutchinson limits the amount of fresh fruits to be eaten by gouty patients, and especially of acid fruits, which are usually eaten with sugar. Some vegetables contain a decided proportion of sodium salts, notably white potatoes. While on the subject of diet I might say that recent authorities upon the treatment of irregular gout—and I refer especially to a recent lecture by Prof. DaCosta—limit the quantity of sugars and starches (carbohydrates) in the food, chiefly on account of the tendency to the occurrence of acetous fermentation in the stomach in gouty patients. The former interdiction of nitrogen-containing foods is now removed, at least sufficiently to permit a varied dietary, one that is adapted to the digestive capacity and to keeping up the forces of the economy. An excess of albumin, however, is to be carefully avoided, so as not to throw too much work upon the kidneys.

THE REMOVAL OF THE GRAVID UTERUS BY ABDOMINAL SECTION.*

Dr. More Madden, having, in a former volume of the Transactions of the Royal Academy of Medicine in Ireland, reported a case in which he had been obliged to remove the gravid uterus, now in the present communication (April 21, 1893) submitted the notes of a recent case of the same kind, together with some general observations on such operations.

In the last case referred to, in which he was compelled to perform a Porro-Müller's operation, the patient was a woman aged 32, two months pregnant, and of well-marked carcinomatous cachexia, suffering from a fast-growing uterine tumor, which—from the intense suffering it occasioned, the rapidity of growth (it having so developed from the time it was first recognized, only three months previously, as to fill the abdominal cavity, and cause such dyspnœa as to prevent her sleeping save in a sitting position), as well as from the extreme emaciation and characteristic cachexia—was diagnosed as probably malignant. The symptoms being most urgent, and the patient being apparently *in extremis*, it was decided as a forlorn hope to give her whatever chance the amputation of the uterus might afford. From the time of her being brought into hospital until she was placed on the operation table, the patient was in a condition of extreme prostration from loss of rest, continual pain, and inability to take food, and was apparently kept alive by the free administration of stimulants. In that operation, which was performed on April 10, 1893, he had the assistance of his colleagues, Drs. Lentaigne and Coppinger, and Dr. A. Smith, of St. Vincent's Hospital. The enormous tumor [shown to the members of the Academy by Dr. More Madden], growing from the fundus, was partially gangrenous, and, owing to extensive adhesions, there was considerable difficulty in its removal and in the ligation of the ligaments. The operation was, therefore, necessarily prolonged; and though the patient recovered from the immediate shock, and for a couple of days

* Report of paper and discussion before the Section of Obstetrics of the Royal Academy of Medicine in Ireland.

gave hope of recovery, she was then attacked by peritonitis, and sank rapidly.

The excision by abdominal section of the gravid uterus, which is generally known by the name of the operator, Professor Porro, of Pavia, by whom it was first successfully accomplished in 1879, though previously performed by Dr. Storer, of Boston, was originally designed as an obstetric operation in lieu of the Cæsarean section. It was subsequently considerably modified and improved in its technique by Freund of Breslau, and Müller of Berne, whose operation, with several further modifications, More Madden has resorted to in three cases of pregnancy complicated by urgent symptoms arising from malignant, or supposed malignant, disease of the fundus or body of the uterus.

The mortality of Porro's operation under the most favorable circumstances—that is, in obstetrics where the condition of the uterus is presumably a normal one—has been 56 per cent.; hence the results in these three cases of removal of uterus for such disease as existed in all three cases—namely, two deaths and one recovery, being a mortality rate of 66.6 per cent., considerably less than that of Freund's operation—are by no means exceptionally unfavorable, the operation having been resorted to as the last possible chance of relieving suffering and prolonging life. At the same time More Madden thinks it only justifiable to perform such operations, as was the case in the three instances above referred to, as a *dernier ressort*, in compliance with the entreaty of a patient fully aware of all the risk of the procedure and beyond other methods of relief.

Finally, in this connection, it may be added that in obstetric practice, for which it was primarily designed as a substitute for Cæsarean section, there can be no ground now-a-days for recourse to either Porro's operation or any of its subsequent modifications. Within the last few years, owing mainly to the improvements effected by Professor Sanger of Leipsic, and also, and above all others, by Professor Murdoch Cameron of Glasgow, the Cæsarean section (More Madden's first case of which was reported in "The Dublin Practice of Midwifery," published twenty-one years ago) has been robbed of its former terrors. No triumph of modern abdominal surgery has probably been equal to that which has taken place in the accomplishment of this operation by the method of Cameron, by whom the Cæsarean section has been performed in twenty cases with only two deaths—being a mortality hardly greater than that generally obtained in ordinary ovariotomy. With that method thus available, and with the exceptional experience of Cameron to guide us, it is, More Madden thinks, therefore evident that we would no longer be justified in obstetric practice in resorting, whether by Müller-Porro or any other method, to an operation so terribly fatal as the removal of the gravid uterus has always proved and must always remain.

Dr. Lane would like to know could Dr. More Madden assign any cause for this rapid growth in what would appear to be a monster fibroma?

Dr. Tweedy asked if he had any reason to believe that the disease was confined to the uterus, and had not spread to the surrounding tissues. He did not see the necessity of washing out the abdominal cavity if nothing had got into it. If the blood has ceased, and if the clots have been taken away and asepsis assured, he did not see the use of a drainage tube; it often ended in a fæcal fistula.

The President said that Dr. More Madden appeared to think, from the constitutional symptoms present, that it was a case of malignancy. But then the woman was only 33 years of age, and there was no matting of the tissues, no disease of the cervix uteri. Another remarkable coincidence was the absence of ascites. The late Dr. Stokes always laid down that in such cases ascites was a sign of malignancy. The difficulty, to his mind, was how to account for the sloughing of the tumor. He thought that they must bow to the pathologists and agree with them that it was a large fibroid of the uterus. With regard to the choice of operation, he would be more inclined to the ideal operation—*i. e.*, removal of the uterus complete. He did not see the advantage of the drainage tube.

Dr. More Madden, in reply to Dr. Lane as to the nature of the tumor, said he (Dr. Madden) bowed entirely to the decision of the

pathologist to the hospital, Dr. McWeeney, but, at the same time, he ventured to think that before abdominal section any man might be justified, from all the symptoms—the extremely rapid growth, the constitutional cachexia, and incessant local pain—in diagnosing it as malignant. As to washing out the peritoneal cavity, he must say that when the operator's hands, and possibly the hands of the assistant, have been introduced into the peritoneal cavity, he very much preferred washing out the cavity, because no amount of washing of hands can possibly prevent the risk of septic infection. He was not aware of any means of sterilizing the atmosphere in the operating-room, and therefore he thought washing out a wise precaution, and he would always continue to do it. He did not like the drainage tube much, but in a large operation such as this one, and where there was the slightest danger of septic contamination, he thought they could not take too many precautions. They could also, if that should subsequently become necessary, wash out the peritoneal cavity through the tube.

THE RECTUM.*

BY DR. M. V. MEDDAUGH.

Unquestionably, no other organ of the human body, accessible to the eye and tactus eruditus of the diagnostician, presents so many points of exceeding interest as the rectum.

Its structure has much to delight the anatomist. It is, however, in the broad field of physiology that the student and practitioner finds so much to excite his admiration.

A knowledge of the signification of the Latin and Greek root from which the name of any organ of the human body is derived, is supposed to convey some idea of its nature, to indicate something relative to its structure, function, shape, or location.

The word "rectum" is derived from the Latin *rectus*, signifying straight—and so the older anatomists, from their limited opportunities for dissection, believed it to be, their investigations being confined to the lower animals. They also believed that in its normal condition it was usually filled with fæcal matter.

We, however, know differently: That in its course it is directed in at least three different directions, and normally is entirely empty.

A brief description of its anatomical features and its relations with the pelvic viscera might not be out of place.

It is the lower portion of the large intestine; length about 7 inches, varying in different individuals from 5 to 9. It has a peculiar cylindrical-like form. Never becomes collapsed, as do some other parts of the large intestine. The superior extremity, where it unites to the sigmoid flexure, is its narrowest part; the calibre gradually increases until it reaches the anus, where it presents a pouch-like portion capable of enormous distension.

It begins at the sigmoid flexure, directly opposite the left sacro-iliac synchondrosis, passes obliquely downward and to the right, until it reaches the third sacral vertebra. Here it changes its direction, and now passes directly downward, following the curve of the sacrum until it reaches the tip, where it turns obliquely backward, terminating at the anus. And just here it might be well to say that in this discussion of the rectum the anus will also be considered, the structure and function of the two being so intimately blended that their separation in a paper of this kind would be impracticable.

The abrupt changes in direction of the organ, as heretofore described, naturally divide it into three parts: the upper, extending from the sigmoid flexure to the third sacral vertebra; the middle portion, from the third sacral vertebra to the tip of the coccyx; the lower portion, from the termination of the middle to and including the anus.

And now let us examine hastily the interesting features that present themselves in the four coats that are required in the formation of this organ.

The external or peritoneal coat is found snugly enclosing the upper portion of the rectum. Tracing it downward, however, we find that at first it leaves the posterior, a little lower the lateral, and lower still the anterior, surfaces. It is entirely absent, in most cases, from the lower two inches of the organ.

The peritoneal pouch sometimes descends

*Read before the Wayne County Medical Society.

lower than a point two inches above the external rectal orifice, and it is this variability that makes it a source of annoyance and doubt to the operator who may contemplate the use of the knife in this locality. There is no definite point that may be entirely outside of danger. It varies even in the same individual, being higher when the bladder is full, lower when it is empty. With no prolapse, it, as yet, has never been demonstrated to be lower than 1½ inches above the anus.

The muscular coat is one of interest to us, as it is the coat affected in that annoying condition known as prolapse; it is also the chief element in the formation of the sphincters. The lower part of the colon presents three longitudinal bands of muscular fibre, which, as they reach the rectum, distribute themselves evenly beneath the peritoneal coat. Two layers of fibres are easily demonstrated—one running in a circular, the other in a longitudinal, direction. They are very loosely united, so that frequently the inside or circular layer will slip downward, as in prolapse, while the longitudinal layer will remain intact. At the lower part of the rectum the circular fibres become thickened, and form the internal sphincter—the lower termination of which is known as the white line of Hilton. The external sphincter surrounds the anus, and is not properly a direct portion of the muscular coat. The anus is closed by the combined action of the two sphincters.

Just above the superior margin of the anus we find a series of longitudinal fibro-muscular bands, known as the columns of Morgagni, or *columnæ rectæ*—the function of which, as might be inferred, is to lend additional strength to this part of the organ. Directly between these bands, at the lower part, we find a number of little pouch-like sacs, known as the sacculi Horneri, from the name of the celebrated anatomist who first gave them a description. These little sacculi are lined with mucous membrane, and have a distinctive function. They hold a supply of mucus in reserve, which, at the time of the expulsion of the fæcal mass, is poured out and serves as a useful lubricant.

The mucous membrane lines the organ, and does not differ materially from mucous membranes in general.

The mucus secreted seems to have a twofold function—mechanical and chemical: First, it keeps the membrane soft and pliable, moistens and lubricates the passage of the fæces; second, it appears to have a peculiar antiseptic property, thus preventing putrefactive changes and injurious absorptive processes.

The cellular is located between the mucous and muscular coats, serving in part as a foundation for the support of the mucous coat, and as a splint or strengthening band to the body of the organ.

In this brief account of the physiological anatomy, the organs of circulation—the arteries and veins—must under no consideration be overlooked; they are important both from the standpoint of the physician and the surgeon.

There are three arteries, freely anastomosing with one another, and all indirectly connected with the abdominal aorta. The inferior hæmorrhoidal originates at the internal pudic, a sub-branch of the internal iliac. The middle hæmorrhoidal has a variable origin, usually from the anterior division of the internal iliac. The superior hæmorrhoidal is a continuation of the inferior mesenteric; sends two branches, one on each side of the rectum. These branches subdivide, passing to the lower portion, anastomosing freely with the other two arteries.

The venous circulation, consisting of the inferior, middle, and superior hæmorrhoidal veins, is a most extensive one indeed. It extends the entire length of the organ, and forms a complete network beneath the skin and mucous membrane. This is the portion that is directly affected in that troublesome and painful condition known as hæmorrhoids. The external hæmorrhoidal veins are found outside the verge of the anus, and terminate finally in the internal pudic. The middle hæmorrhoidal are within the anus, and pour their contents into the internal iliacs. Thus these two, while they inosculate freely with the superior hæmorrhoidal, enter directly into the general venous circulation.

The superior hæmorrhoidal vein has a peculiar origin, and pursues an entirely different course than the other two. A thorough knowledge of this vein makes clear to us the pathology of hæmorrhoids. Let us examine

t carefully. Directly above the anus, immediately beneath the mucous membrane, are found numerous little blood-sacs, which when filled average about $\frac{3}{16}$ of an inch in diameter. These little sacs are the beginning-points, the origin, of the superior hæmorrhoidal vein.

The novice sometimes mistakes these sacs as incipient hæmorrhoids, but it is a normal condition. Their exact function, however, has not been fully determined.

These veins now pass upward about one-third the length of the organ, pass through little button-holes or foramina that are found in the coats, reach the connective tissue outside, from here into the inferior mesenteric, through the portal circulation into the liver.

The sacral plexus of nerves sends a most liberal supply to the anus, and upwards along the rectum to the extent of about three inches, making this part acutely sensitive. As the branches from the spinal system begin to disappear as we trace their course upward from the lower extremity of the rectum, we find a corresponding increase in fibres from the sympathetic system; until finally, as has been mentioned, at a distance of about three inches from the lower border, all fibres from the spinal system have disappeared, and the part is devoid of the sensation of touch.

This complicated and extensive supply of nerve branches from both the spinal and sympathetic systems originates a perplexing series of reflexes which sometimes occasion much annoyance to the diagnostician in determining the exact location of a disease.

Surrounded, as is the rectum, by some of the most vital organs of the human body, separated from them by only a delicate membrane, we at once recognize it as a most valuable medium for determining pathological conditions in contiguous structures, of both male and female. None but the skilled surgeon can tell us how much may be determined by a careful digital exploration of the rectum.

Who pretends to give an opinion of the size and condition of a diseased prostate, without first making an examination per rectum?

Who can tell how many cases of lacerated perineum, how many weeks and years of suffering, have been averted by the thoughtful accoucheur, who, at the critical moment, as the presenting part is beginning to make tense the perineum, will gently introduce a finger or two into the rectum and skillfully tilt the fœtal head upward, thus guiding it along the natural obstetrical curve, over the bridge of danger, to a successful delivery?

Much injury has been done by improper and clumsily conducted examinations of the rectum. No attempt will be made here to describe the proper positions in which to place the patient; how to make a proper inspection with speculum; how to make digital and sound explorations; how best to illuminate or light the rectal cavity, etc.

Deep explorations are rarely necessary—a careful statistical record shows that nine-tenths of all injuries are within an inch of the orifice.

Many diseases peculiar to the organ might be entirely avoided were a reasonable degree of hygienic care observed. A regularity and freedom of action of the bowels should be encouraged by means of exercise and proper foods. An occasional hot douche should be used. It is a valuable means of regulating and equalizing the circulation, especially of the hæmorrhoidal veins, which are almost entirely destitute of valves. It has also a soothing and controlling influence on the nerve reflexes which sometimes occasion much disturbance.

Throughout the country, in all the large cities and in the smaller villages, we find the itinerant, so-called rectal surgeon, who fails not to treat all diseases per rectum. Through his ignorance, human life has been endangered, and in many cases irreparably injured. His coming, however, has been a messenger of good. Here and there we find the intelligent, progressive practitioner paying more attention than formerly to diseases of the rectum.

A PROTECTIVE FOR RABIES.

Professors Tizzoni and Cattani, of Bologna, report that they have been able to extract a protective vaccine for rabies from the central nervous system of rabbits dying from the *virus fixe*. They assert that their virus is both sure in its action and convenient in its application; that it can, in fact, be administered by anyone.

Correspondence.

A REMARKABLE CASE OF FOREIGN BODY IN THE NECK.

Mr. G——, aged 30 years, a Baptist minister, only a few months from Eastern Tennessee, came to my office, with an enlargement in the neck, under the skin immediately above, to right side, and pressing upon larynx.

Upon examination I informed him that there was a foreign body present that ought to be taken out. He said: "Yes, there is something there that didn't grow there. Twenty-two years ago, when a lad of eight years and living on a farm among the mountains of Eastern Tennessee, our chickens had secreted themselves in a brush-pile. I resolved, boy-like, that out they must come, and accordingly mounted the brush-pile, and then by yelling and jumping expected to frighten them from their retreat. Now the brush-pile, being mellowed by the summer's heat and sunshine and winter's clouds and rain of two or three years, was too tender for one of my size, and I broke through; the broken end of a limb, striking me under the chin, penetrated the skin and broke off. I don't remember whether I succeeded in dislodging the chickens or not, but do distinctly remember that I didn't forget to yell. The wound healed readily, and that piece of timber has been there ever since. Father took me to two or three doctors, who informed him that it was a dangerous place to operate, and advised him not to molest it as long as it held its peace; but it has shifted, and now interferes with my speech. When I raise my chin, it draws upon Adam's apple. It seems to be aching for a fuss."

I said to him: "The doctors of Eastern Tennessee probably place a higher estimate upon the lives of preachers than we Northern doctors do. I can remove that body." "But isn't there danger of cutting off the jugular artery?" "Well, if I do, I'll tie it up and go on with my work. I'll do the work if I undertake it, let come what may."

With these *encouraging* words, I was permitted to operate.

I made a small incision over the end of the body, crowded the soft parts back, introduced a small artery-forceps, and drew out the body, which proved to be a piece of chestnut twig or limb—bark, timber, and all—one inch in length, and as thick as an ordinary lead-pencil, in a perfect state of preservation. Wound healed in a few days by first intention.

I was prompted to report this case by the report of a similar one in the April number of the International Journal of Surgery.

JAMES W. SQUIRES, M.D.

Churubusco, Ind., May 19, 1893.

SANITARY CONVENTION AT HILLSDALE.

The Thirty-ninth Sanitary Convention under the auspices of the State Board of Health will be held in Hillsdale, Mich., on Thursday and Friday, July 6 and 7, 1893. Arrangements have been made by a local committee of citizens of Hillsdale, acting with a committee of the State Board of Health.

There will be sessions the first day at 3 P.M. and 8 P.M.; on the second day at 10 A.M., 2.30 P.M., and 8 P.M., local time.

At each session of the Convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion.

The admission to all sessions of the Convention will be free, and the ladies are cordially and especially invited. The invitation is especially extended to health officers to be present and take part in the discussions.

The objects of the Convention are: the presentation of facts, the comparison of views, and the discussion of practical methods relating to the prevention of sickness and deaths and the improvement of the conditions of living. This is not a medical convention, but it is for the people generally.

Addresses will be made as follows:

Welcoming address, by L. H. Goodrich, Mayor of the city.

Response, and statement of the objects of the Convention, by Hon. Frank Wells, member and President *pro tem.* of the State Board of Health.

Address by the President of the Convention.

Among the subjects which it is expected will be presented and discussed are the following:

1. Restriction of Cholera and Typhoid Fever.

2. Restriction and Prevention of the Dangerous Communicable Diseases.

3. School Sanitation.

4. Heating and Ventilation.

5. Drainage: Surface, Subsoil, and Subterranean.

6. The Disposal of Waste and Excreta, and its Dangers, in Hillsdale.

7. Should Hillsdale have More Complete Sewerage?

8. Life Saving by Modern Sanitary Measures.

Authors of papers are requested to limit them to twenty minutes. The speakers who lead the discussions are to be allowed ten minutes each, all others five minutes.

The papers are expected to be original contributions, which, when read, are to be considered the property of the Convention, and to be left with the Secretary. Programmes will be issued before the Convention.

G. F. MOSHER, *President.*

FRANK M. GIER, M.D., *Secretary*, Hillsdale, Mich.

A LA-GRIPPE BACILLUS.

A correspondent of the Medical Tribuue writes that it may be affirmed, beyond question, that this extremely troublesome malady is epidemic.

That there is an influenza, or in common parlance a *La Grippe*, bacillus, seems to be well established at the present time.

Whether or not the disease is contagious, is still a question in the minds of most scientists, though we must confess that it does not follow the general laws of contagion in its rise, progress, and termination.

But the manner of the spread of the malady, and its course wherever it exists, goes far to substantiate the prevailing theory that it has as its causation a specific infecting principle.

It would appear that the time is not distant when the etiology of each infectious disease will be ascribed to some particular bacillus—and the killing of the bacilli, and physiological remedies for the repair of the existing lesions, will be employed.

Society Meetings.

STATE MEDICAL SOCIETIES.

The Wisconsin State Medical Society met at Milwaukee, May 3–5. The attendance was about 125, of whom 30 were new members. Many Wisconsin physicians are reserving themselves for the meeting of the American Medical Association, which will occur in June at Milwaukee. Dr. F. Byron Robinson, of Chicago, in the course of an account of twenty-five cases of laparotomy, advanced his theory of an "abdominal brain," with which our readers are familiar by reason of his contributions to the MEDICAL AGE. This excited considerable discussion and criticism in the meeting, some Chicago and Milwaukee doctors claiming that no facts had been presented in proof of the theory. Outside of this episode, the medical papers were received with combined attention and docility, so far as our report goes; although one would naturally expect such a subject, for example, as "The Establishment and Maintenance of an Urethra above the Symphysis Pubis in Chronic Prostatic Obstruction," by Dr. D. J. Hayes, to excite more than routine astonishment. Other papers were numerous and interesting. Officers for ensuing year: President, Dr. B. C. Brett, of Green Bay; Secretary, Dr. C. S. Sheldon, of Madison.

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On May 2d the Southern Kansas Medical Association met at Hutchinson. The attendance was very small. Various papers of interest were read. The next meeting will be at Wichita, the third Tuesday in November. President and Secretary were re-elected: the former being Dr. J. T. Axtell, of Newton, the latter Dr. O. B. Whittecar, of Peabody.

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The fortieth annual meeting of the North Carolina Medical Society was held at Raleigh, May 9, 10, 11, 1893. About 300 members were present. There were 79 young men before the Examining Board, 47 of whom passed. (Under North Carolina laws, the right to practice medicine can only be obtained by those who successfully run the gauntlet of this Board.) Dr. J. A. Hodges, of Wilmington, delivered the annual oration.

Nine papers were read. Officers were elected as follows: President, Dr. W. H. H. Cobb, of Goldsboro; Secretary, R. D. Jewett, Wilmington; Treasurer, Mrs. Perry, Macon. The next meeting will be held at Greensboro, N. C., May 15, 1894.

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Texas doctors met in State convention for the twenty-fifth time on Tuesday, May 2d. Galveston was the place of rendezvous. There were many papers and much enthusiasm. Dr. Brittain classified the continued fevers of Texas under two heads: malarial and typhoid. These, he contended, were often confused in the mind of the physician. In discussing Dr. Brittain's paper, Dr. Sears said there had been considerable continued fever at Waco—whether typhoid or malarial, he did not say—but quinine was the only treatment, and the cases were cured. Dr. West asked how long it took to cure them with quinine. Dr. Sears: "From one to two and sometimes three weeks." Dr. West: "Do you call that curing?" Dr. Sears: "Yes; don't you?" Dr. West: "No, sir; I call it surviving the treatment."

In discussing a paper by Dr. Coleman on "The Treatment of Depressed Fractures of the Skull," Dr. B. E. Hadra said that in all cases of the kind reported he favored the most thorough exploration of the brain. "You need not be afraid," said he; "it is utterly ridiculous the way you can probe and cut into some parts of the brain. When the injury is on the forehead, or the front part of the brain, you can even cut pieces of the brain away and it will do no harm. I've tried it and am simply telling you what I know from experience. I don't know what use the front part of the brain is, anyway." He then related a number of cases in which he had cut out huge chunks of the skull, and run his finger around the convolutions of the brain seeking for injured portions. In only one of perhaps twenty such cases had the patient died, and that was a long time after the operation had been performed. Dr. C. A. Smith told of a case which had recently come under his treatment. The man's skull had been literally torn off on one side of his head, and a deep furrow cut in the brain substance, by a railroad engine. The man recovered and is now working on a section. In his opinion immense injury could be done the brain without apparent bad effect.

Many other interesting papers were read, not the least important being one on the common-sense disposal of sewage, in which sterilization by heat was highly commended.

Negro physicians, no matter how well educated, cannot be members of the Texas State Medical Association.

Dr. J. H. Sears, of Waco, is now President; Dr. H. A. West, of Galveston, Secretary; Dr. J. Larendon, of Houston, Treasurer.

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The Michigan State Medical Society met in annual convention at Muskegon, May 11th. The attendance was not large. The finances of the Society, which were considerably out at elbows last spring, are now in good condition, voluntary contributions by members having paid an indebtedness of some seven hundred dollars. There is complaint of slackness in the payment of annual dues. Among the most interesting of the papers read at this meeting (of which there were forty-four on the programme) was one by Dr. H. B. Osborn, of Kalamazoo, on "Personal Reminiscences of the Cholera Epidemic at Vicksburg in 1866." At that time the knowledge of cholera was mostly confined to mortality statistics. Most of the Vicksburg patients died. One day a patient, in the absence of the nurse, drank a mixture designed for bathing the dead bodies; the patient recovered, and the doctor profited by the circumstance to save other lives.

Dr. Eugene Boyse, of Grand Rapids, was elected President; Dr. C. W. Hitchcock, of Detroit, Secretary; and Dr. W. G. Henry, of Detroit, Treasurer. The next meeting will be held at Lansing, and the Society will pay all local expenses.

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Pennsylvania doctors, of the regular persuasion, met—that is, about one hundred of them—at Williamsport, May 16th, in annual convention. The number increased greatly during the next two days. An amendment to the constitution was offered, which will be acted on next year, providing for a "Scientific Committee" of five, whose duty it shall be to secure papers for the annual gather-

ings. There appeared to be, however, no great scarcity of papers at the Williamsport meeting, without the aid of such a special committee. Dr. H. G. McCormick, of Lycoming, was elected President; Dr. W. W. Atkinson, of Philadelphia, Secretary; and Dr. G. Benson Dunmire, of Philadelphia, Treasurer. Gettysburg was chosen as the next place of meeting.

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The Missouri State Medical Society held its annual May convention at Hannibal. The attendance was large and the proceedings interesting. Lebanon was chosen as the next place of meeting.

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At Indianapolis, May 11th and 12th, the annual meeting of the Indiana Medical Society was held. After the main business was disposed of, Dr. C. A. Daugherty, of South Bend, was elected President for the ensuing year; Dr. E. S. Elder, of Indianapolis, Secretary; and Dr. J. O. Stillson, of Indianapolis, Treasurer. The meeting is regarded by the old wheelhorses, who always attend from the opening prayers to the introduction of the newly-elected president, as one of the most useful held since the organization of the Society, forty-four years ago. Three hundred members registered; the papers were well prepared and discussed; the balance between specialist and general practitioner was properly maintained; the Committee on Ethics had no cases before it; the hall was always quiet; and the proprietary-medicine men and instrument dealers were kept in proper subjection.

MEETING OF THE WAYNE COUNTY MEDICAL SOCIETY.

April 20, 1893.

No regular paper for the evening.

Dr. Westgate: Would like to ask for treatment of a case of eczema affecting hands, face, and elbows, and characterized by a discharge.

Dr. L. E. Maire: Take camphor gr. x, cosmoline ℥ j, as a local application in the cases that the Doctor mentions.

Dr. Maire exhibited an eye from a little patient aged 14, who had an injury by being struck some years ago, and again some few days ago had a second mishap. The anterior and posterior chambers of eye were found full of blood, and the choroid had undergone ossification. Also reported a case of a young lady with much the same history, who had been operated on some years ago; the crystalline lens was ossified, as was the choroid.

Dr. Samuel Bell: *Case 1.*—Was called five weeks ago to see a gentleman aged 68; found him suffering from malarial toxæmia, which was combated with quinia and laxative medication so that the temperature fell from 103° to nearly normal. Near the end of his sickness, micturition was frequent and copious. Two weeks ago, detected albumin and also found casts. Gave patient large draughts of lithia water. He has lost 30 pounds of flesh in this illness, and is now fast sinking and is delirious. The case undoubtedly was one of prostatic hypertrophy, then cystitis, and then nephritis.

Case 2.—Was called to see a young lady, a school teacher, who had suffered from typho-malarial fever for four weeks, and when about convalescent had a relapse accompanied by night sweats. Upon physical examination, moist crepitant râles were detected in upper lobes of lung, and the diagnosis of phthisis pulmonalis was made.

Dr. Dean reported a case of exostosis, also described a lesion of the antrum, and gave his own personal case as an illustration.

Dr. C. Henri Leonard reported several cases of exudative pharyngitis, and, being afflicted with the trouble himself, had prescribed with the most happy results the following by Dr. K. Gunsolus:

℞ Liq. ammon. acetatis, }
Elix. pot. bromide, } ää ℥ j.

M. Sig.: ℥ j every two or three hours.

Eczema should be treated first with some stimulating lotion, and then with a mild one. Some of the mineral waters are good on account of their laxative qualities. Birch ointment is a remedy that has given good results.

Dr. E. B. Smith: Having been interested in trying to devise a cystoscope on a plan somewhat original, have had called to my attention by my esteemed friend Oscar E.

Cartwright the possibility of illuminating the whole body; which I hope soon to see demonstrated to our Society.

MAY 4, 1893.

Dr. Westgate read a paper on "History of a Case of Ovariotomy."

Dr. Morrison: The question sometimes comes up as to some physicians making a wrong diagnosis; the second physician cannot always be the judge of this, as he did not see the case when the first man saw it.

Dr. Meddaugh read a paper on "The Rectum." (See page 00.)

Dr. L. E. Maire: The reflex disturbances are what are sometimes so misleading to the physician. Had a patient who complained of headache, belching of wind, stomach troubles, and was tympanitic. There was a history of mucous discharge from the rectum, and the fæces coming away with part of the circumference dry and with pain. Found on examination an ulcer, about three inches up the rectum. On treating this, the other symptoms disappeared.

Dr. J. F. McPherson presented a patient with the following history: Came to me for medical treatment some four months ago, and said he had been treated for heart trouble, Bright's disease, and dyspepsia; complains of shooting pain over heart, followed by numbness creeping over body, coming from the feet and extending over the chest and, last, the head and face, when he becomes semi-conscious. These attacks come one after another, and leave the patient quite weak. There was no head trouble.

E. B. SMITH, M.D.,
Secretary.

PARASITIC ORIGIN OF CANCER.

The facts showing that there are in the cells of cancerous tumors small parasitic bodies of the nature of protozoa, are continually accumulating. Dr. James Galloway, in the Morton Lectures, reports the results of his studies of the life history of analogous organisms in rabbits. He confirms the statements of Rauffer and others, to the effect that the peculiar protozoa of cancer may be found in all the tumors.

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Editorial.

A NATIONAL BOARD OF HEALTH.

Apropos of an article in The Century by T. Mitchell Prudden, M.D., the eminent bacteriologist of New York, the editor of the "Topics of the Times" writes:

We spoke in December last of the pressing duty that devolved upon the Congress which was beginning its final session at that time, to pass a law establishing a system of national quarantine. Congress spent much time in considering the subject, and finally passed a law which can be regarded only as a step toward such quarantine. The law does not establish full national quarantine in the sense in which its advocates understand it, but it does confer upon the Surgeon-General of the Marine Hospital Service powers which are sufficient to enable him, when sustained by the President and the Secretary of the Treasury, to formulate and enforce uniform quarantine regulations throughout the country, and to overrule and supplant with his own agents all local or State quarantine officials who fail to carry out those regulations. This is at best a division of national and State authority, with all the possibilities of conflict and delay which have been found invariably to attend such division.

What Congress ought to have done, and what the people of the country ought to demand without ceasing till the request be granted, is not merely a national quarantine system, but a National Board of Health. Under such a board, quarantine would be merely a branch of the service, rising into primary importance only in exceptional cases, like the outbreak of cholera in Europe. Dr. Prudden, the eminent bacteriologist of Columbia College, shows very impressively, in

the article which we publish from him in this number of the magazine, how far we are behind civilization in not having established such a board long ago, and what constant perils menace the public health by our adhering to ignorant and even barbarous methods for excluding and restricting contagious diseases. What he says of the duties which a National Board of Health should have to perform, and of the far-reaching benefits to the health of the whole people which would follow, leaves no room for discussion. The case amounts to a demonstration. To refuse to do what he shows so clearly we ought as a nation to do without delay, is to throw doubt upon the national intelligence.

There has been at no time any difference of opinion among medical and sanitary experts as to the wisdom of a National Board of Health. Dr. W. H. Welch, of Johns Hopkins University, a pupil of Prof. Koch, and by universal consent the highest authority on bacteriology and infectious diseases in this country, said in September last: "I believe there should be a National Board of Health, something like that we had in 1878. There should be uniform quarantine laws for the whole country, and there should be uniform sanitary conditions. This is the system of England. While I am not ready absolutely to indorse the English system, I must say that the results have been excellent and satisfactory." Dr. E. O. Shakespeare, of Philadelphia, a very high authority on quarantine matters, who has investigated European quarantines as official agent for our Government, said, about the same time, that he had always advocated national quarantine, believing that the "protection of the public health is a matter that interests not merely a narrow belt of sea-coast, but seriously concerns the whole of the vast territory between our shores." In December last, the Chamber of Commerce of New York, after receiving a special report which seven eminent physicians and specialists, including Dr. Prudden, Dr. Richard H. Derby, Dr. E. G. Janeway, and Dr. A. Jacobi, had made upon the conduct of the New York quarantine during the cholera cases of the preceding September, passed unanimously a series of resolutions in which it was declared that the "recent quarantine experience points with singular emphasis to the importance of national quarantine;" that since the Federal Government is an indispensable factor in every quarantine crisis, it is only by giving complete control to that Government that conflicts of authority can be avoided; and that the "Federal Government in every crisis, through the various arms of the public service, is able to command an amount of expert coöperation entirely beyond the reach of a State department."

It would be easy to multiply evidence in this direction, but it is not necessary, since there is nothing to be cited in opposition save the worthless opinions of those persons whom Dr. Prudden calls the "flotsam and jetsam of the political ocean, from which too often strange, uncouth things are stranded in offices where misfeasance means death to some, disease to many." Concerning the construction of the National Board proposed, there is a difference of opinion only as to details. All authorities agree that it should be composed of trained sanitarians who should be appointed by the President, should have a chief, and should include in their number the surgeon-generals of the Marine Hospital Service, the Army, and the Navy.

One excellent suggestion, offered by an eminent and experienced sanitarian of New York City, is that the Board be made up as follows: First, a chief appointed by the President, who should be paid a large salary and should reside in Washington; next, the three surgeon-generals of the Army, Navy, and Marine Hospital Service; then, one sanitarian of established reputation from each of the following sections of the country: the yellow-fever district of Louisiana; the quarantine district of the East; the far West of California and the Pacific Coast; the Northwest—say Chicago—because of its relationship to Canada; and the middle district of the country—say Kentucky or a neighboring State. Each of these also should receive a good salary. This would make a board of nine members, who would represent the interests of the whole country, and would give all sections the benefit of their combined sanitary knowledge and experience. This Board should be given full legislative, judicial, and executive powers, such as are exercised by the Board of Health of New

York City. It should devise measures, decide upon the method of their execution, and administer them without interference from any quarter. It might constitute as its executive committee the chief and the three surgeon-generals, who should be made the administrative force of the bureau. This would put the duty of executing the rules and regulations of the bureau into the hands of the only officials we have in this country who are especially fitted for the work; that is, officials who are permanent, who have no private interests, who are removed absolutely from all outside influence of any kind, political or other, who are trained in the work of discipline and organization, and who are accustomed to look to no other end than efficient service. The executive committee and the chief could really conduct the department, the other members of the Board coming together on summons whenever their presence was necessary.

This plan seems to us well considered, though of course it is possible to improve upon it. The main thing is to get the National Board and to have it begin at the earliest possible moment the work which Dr. Prudden outlines as its sphere of usefulness. Of course the establishment of a National Board must be accompanied by the abolition of all State and local quarantines, but not of the State and local boards of health.

No political influence should be permitted to delay one moment the work of such a reform. It goes without saying that the question of the health and well-being of the whole country is of too great importance to allow the selfish greed of politicians or of political organizations to stand in its way. That any set of politicians should oppose such a necessary measure is an illustration of the spoils system which ought to startle the community.

THE SIXTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF GYNÆCOLOGISTS AND OBSTETRICIANS.

This Association held its three days' sessions at the Russell House. The attendance and interest manifested in the meetings indicated the vitality and prosperity of the Association.

Dr. J. H. Carstens, of Detroit, delivered the address of welcome in his happiest vein. President L. S. McMurtry, in the annual address, presented a scholarly review of the history of the labor by which pelvic surgery has attained its present position.

Toronto was selected as the meeting place for next year, preference as to date being for future meetings the month of September.

The officers chosen for the following year were:

President, Dr. George H. Rohe, Catonsville, Md.

First Vice-President, Dr. W. P. Manton, Detroit.

Second Vice-President, Dr. George F. Hulbert, St. Louis, Mo.

Secretary, Dr. William Warren Potter, Buffalo.

Treasurer, Dr. X. O. Werder, Pittsburgh, Pa.

The Executive Council for the ensuing year stands as follows: Dr. C. A. L. Reed, Cincinnati; Dr. John G. Sexton, Rushville, Ind.; Dr. James Frederick William Ross, Toronto, Ont.; Dr. Wm. Wotkyns Seymour, Troy, N. Y.; Dr. Donnel Hughes, Philadelphia.

The most interesting social feature of the meeting was the banquet at the Detroit Club. Dr. F. W. Mann, toastmaster, gracefully presented the toasts of the evening, which were: "The American Association of Obstetricians and Gynæcologists," responded to by Dr. L. S. McMurtry; "The American Gynæcologist," Dr. Edward W. Jenks; "The Detroit Gynæcological Society," Dr. J. H. Carstens; "Abdominal and Pelvic Surgery in America," Dr. C. A. L. Reed; "The Responsibilities of Surgery," Dr. Donald Maclean; "The Universal Specialist," Dr. C. G. Jennings; "The Ladies," Dr. David Inglis.

INADEQUATE PAYMENT OF MEDICAL WITNESSES.

Until the right of witnesses to adequate remuneration is definitely established, the only safe course for medical practitioners to adopt—and the only prudent course—will be to decline to attend as witnesses at all until some responsible person or court has promised definitely to pay the fees, or, better still, until the money is actually paid. It is time for the profession to make a determined stand in their own interests.

Book Notices.

TECHNIQUE D'ÉLECTROTHÉRAPIE. Par G. Gautier et J. Larat. Maloine, Paris.

In a modest preface we are informed by the authors that this volume is the first of a series which is to serve as a compendium of electrotherapy, presenting to the medical profession the new methods and the interesting discoveries which are so rapidly and profoundly modifying medical electricity at the present time. The three divisions of the book, treating of Electro-biology, Interstitial Electrolysis, and Alternating Currents in Therapeutics, under their appropriate subheadings, are characterized by rapid but practical and thorough statement, by a clear and interesting style, and by a considerable wealth of suggestion and learning. The literary performances of learned Frenchmen are almost uniformly admirable. The present volume is no exception in this respect, and invites a perusal which cannot fail to profit those who are properly mindful of the growing importance of a familiarity with the modern methods of treating disease by electricity. Typographically the book leaves nothing to be desired.

VERHANDLUNGEN DER BERLINER MEDICINISCHEN GESELLSCHAFT (1892). Reprinted from the Berliner Klinische Wochenschrift.

The proceedings of the Berlin Medical Society have long been made public through regular publication in the Berliner Klin. Wochenschrift and the Deutsche Med.-Zeitung. The volume before us comprises the published account of proceedings, papers, and discussions for the year 1892. Needless to add that in all respects it is worthy of the distinguished Society from which it emanates, and of the great medical centre which owes not a little of its fame to the scientists on the roll of this association. The list of honorary and active members is highly imposing, and comprises no small number of names luminous in the chronicles of medical science.

The papers included in this volume are characterized by the qualities which have inparted so high a value to the researches of our Teutonic cousins—thoroughness, solidity, and the genuine scientific spirit which seeks the truth alone, unbiassed and unhampered by prejudices or undue deference to prevailing authorities.

"SIX MONTHS IN HADES." The $1,000 Prize Novel in great Summer Number (8) of Tales from Town Topics. Just out.

In addition to the prize story of 150 pages, there are fifty racy short stories, sketches, poems and witticisms from the old issues of Town Topics, that famous and spicy New York journal known wherever English is read. No book published this year will afford such delicious entertainment for hours of summer leisure and travel.

What The Independent says: "Once again New York's fashionable society quarterly volume, 'Tales From Town Topics,' has made its appearance. The tales are spicy and the topics inexhaustible. Some of the tales skirt along the very edge of danger, but a firm hand holds them back within the bounds of a wholesome sense of propriety."

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Its "Saunterings" columns are inimitable. Its society news, especially of the doings of the 400 of New York, Boston, Philadelphia, Chicago, and all over the world, is not equaled by any newspaper. Its Financial Department is authority with all bankers and brokers. Its "Afield and Afloat" makes it the most interesting paper for all lovers of sport—yachting, foot-ball, rowing, shooting, fishing, etc. Its "On the Turf" excels all other racing notes. Its burlesques, poems, and jokes are the cleverest. Its stories are by the best writers—among them Amelie Rives, F. Marion Crawford, Julian Hawthorne, Edgar Fawcett, Jerome K. Jerome, Gilbert Parker, Mary J. Hawker ("Lanoe Falconer"), Barry Pain, Paul Bourget, etc., etc., etc.

Notes and News.

A Practical Styptic.—

In The Lancet for Feb. 25, 1893, Dr. A. E. Wright describes a way of preparing his physiological styptic which he says gives a much stronger product than that gotten by other methods. The details are as follows:

"Take the thymus gland (chest sweetbread) of a calf, reduce it to a fine pulp by passing it through a sausage-machine, and extract with three to four liters of a 1:1000 or 1:500 solution of carbonate of soda which has received an addition of 5 grammes of chloroform per liter. Stir thoroughly at intervals, and continue the extraction for twenty-four to thirty-six hours. At the expiration of that period it will be found that almost the entire substance of the gland has dissolved in the dilute alkaline fluid. Strain through fine calico, and add one per cent. of calcium chloride. Preserve in stoppered bottles." In order to obviate the considerable precipitate of calcium carbonate which is obtained on this addition, it is well to acidify the thymus extract with dilute hydrochloric acid before adding the lime salt. The slight alkaline reaction is to be subsequently restored by an addition of weak caustic soda. This styptic will keep for an indefinite time if the chloroform is prevented from evaporating. With a styptic prepared as above, Dr. Wright has been able to arrest the hæmorrhage after cutting across both a femoral and a carotid artery in a dog. The action of the styptic was assisted by compressing the arteries for one or two minutes. The author adds that his styptic may be applied on a tampon to any bleeding surface where strict asepsis can be dispensed with. If it is necessary to render the styptic perfectly aseptic, this can be done by boiling after making a sufficient addition of alkali to keep the albuminous substances in solution. Boiling involves a great, but not a complete, loss of coagulating power.

Chemically the styptic is said to be a solution of "tissue-" or "cell-fibrinogen," with the addition of lime. Dr. Wooldridge, of England, and Drs. Arthus and Pagès, of France, first discovered and described the substance.—*Medical Record*, May 20, 1893.

The Microbe of Typhus.—

"If," says Charles Talamon in a recent number of La Médecine Moderne, "we do not know the specific microbe of typhus fever, it is not because there are not a sufficient number of candidates for the title."

Just now we may reckon five:

(1) The streptobacillus of Hlava, the first in date, 1888; in the form of short rods, double or in chains.

(2) The mobile grain-of-barley-shaped bacterium of Babes.

(3) The spirillum of Lewascherd, found in the blood, in the form of roundish corpuscles, refractive, and furnished with fine mobile prolongations.

(4) The peculiar multiform micro-organism of Calmettes.

(5) The diplococcus exanthematicus of Dubiet and Bruhl, the most recent discovery, found in the blood, the bronchi, the lungs, under the form of a little diplococcus easily cultivated in all media.

Talamon remarks that each one of the discoverers has always found his microbe in all the cases which he has examined, but he has never found those of his predecessors; that the cultures have always succeeded more or less readily and in media more or less varied; that, lastly, the hares and guinea-pigs inoculated have always succumbed, save only the hares of Hlava, who has only succeeded in killing two hogs with his streptococcus.

All the candidates seem to possess about equal merit; and to which shall the honor be awarded?—*Boston Medical and Surgical Journal*, May 18, 1893.

Tobacco versus Bone and Muscle.—

Dr. Seaver, of Yale College, physician and professor of athletics, is a man of science, who follows scientific methods in investigation. He has been for eight years observing the effects of tobacco-smoking upon the bodies and minds of Yale students, and he has just published a remarkable budget of statistics. He informs the public that the students who smoke are inferior in physical vigor and mental ability to those who do not. He says the smokers have less lung power than the non-smokers, less chest capacity, less bodily weight, and are of less height. He says the muscular nervous power of the

mokers is noticeably less than that of he non-smoking students. He says the moking habit is disadvantageous to scholarhip. Of those students who within a given ave received honorary appointments, only per cent. were smokers. His demonstraions appear to be influencing the minds of he Yale students. The Doctor is able to reort that 70 per cent. of the senior class do ot smoke, that the leading athletes do not moke, and that not a single candidate for he rowing crew is a smoker. Young Amerca, athletic, intellectual, and ethical, may ell ruminate upon the Yale statistics.—rances E. Willard, in *Woman's Journal.*

The Cremation Question in Germany.—

The question of the legislation of cremaion has been debated in the German Reichtag. The subject was introduced by Herr Lingens, a member of the Centre, who exressed his regret that the Hamburg Senate ad removed the previously existing restricions as to that method of disposing of the emains of the dead, which he described as epulsive to Christian feeling. The speakers who followed Herr Lingen, however, includng representatives of the *Freisinnige* party ike Herren Schröder, Goldschmidt, Baumach, and Dangerhans, besides the National Liberal Herr Endemann and the Socialist Herr Frohme, argued strongly in favor of remation, especially during the prevalence f epidemic diseases. Herr Baumbach gave otice that on the debate on the proposed ew law for the prevention of epidemics, he would move the adoption of a clause making remation optional throughout the German Empire. The debate seemed to show that the eeling of the Reichstag generally is in favor f cremation.—*British Medical Journal.*

American versus Foreign Pharmaceutical Articles.—

Inconsistency is probably the most common failing of mankind. We find a lot of doctors who are unwilling to use an American proprietary article, such as advertised in the medical journals, yet doctors and medical journals take up foreign articles, even when the formula is *secret* and *patented*, and use them.

Why can't an American pharmacist make as good a thing as a German, for instance? Further, the former doesn't talk about a trademark and conceal his formula.

This country is getting old enough to let go the leading strings and lead itself. If you can get a good non-secret preparation in America, what on earth is the use of importing some patented article from abroad? Be consistent.—*Atlanta Medical and Surgical Journal*, May, 1893.

The Physician and Drugs.—

With scarcely an exception, non-professionals have an overweening confidence in medicines. There are absolutely none which alone can cure disease. In cases of sickness they can assist nature much, but she is the one to effect a cure. A sick person is like a man, tired and worn, toiling up a hill. Perhaps his strength is giving out, and alone and unassisted he can never reach the top. But in his struggle, if friendly aid comes, he is encouraged and strengthened, and finally reaches level ground. In his greatest extremity it is the strong arm of the physician which supports him; he nourishes, stimulates him, and by a wise use of drugs restores his flagging powers. But all the time the man helps himself; there is something within him which responds to the physician's efforts; he has simply rekindled the fires which have burned low-—*Boston Journal of Health.*

Conduct of the Medical Life.—

The University of Pennsylvania Press has published two lectures by Dr. S. Weir Mitchell, delivered to Philadelphia medical students, on the "Conduct of the Medical Life." They should be put into the hands of every undergraduate, and indeed of every graduate, in the land. Virility and gentleness are here commingled in a charming manner, and the wise counsels of a wise man are urged with the persuasiveness derived from a ripe experience and from a sentiment of genuine love for the young physician and for his profession. The lectures are published for the benefit of the Students' House and Club of the University, and we hope they may be read by many thousands. Truer and wiser advice could hardly be given.—*Medical News*, May 6, 1893.

Therapeutic Brevities.

The Treatment of Diabetes Mellitus by Feeding on Raw Pancreas and by the Subcutaneous Injection of Liquor Pancreaticus.—Dr. W. Hale White presents a very careful report of two cases under observation. Each patient was for the whole period kept upon a diet consisting each day of twenty Soya-bean biscuits, two eggs, two ounces of butter, two almond biscuits, one fluidounce of milk, twelve ounces of cooked meat, greens, watercress, tea, and soda-water. The state of the patient and of the urine on this diet having been ascertained, each was given, in addition, for his supper, about two ounces of raw fresh sheep's pancreas chopped fine and flavored with pepper and salt. When this was discontinued, 5 minims of liquor pancreaticus were injected subcutaneously night and morning, the restricted diet being as before. As regards sugar, in one case it was distinctly less when raw pancreas was taken than it was before, and the same effect, but to a less degree, was associated with the injection of liquor pancreaticus subcutaneously. In the second case neither of these methods had any effect in reducing sugar. Neither feeding on pancreas nor the injection of liquor pancreaticus had any decided effect upon the quantity or specific gravity of the urine. It is doubtful if either of these methods had any effect upon the urea. The patients do not lose weight when treated with the pancreas; perhaps they gain a little; and if there is any other alteration, they feel a little better for the treatment. As disadvantages are cited the fact that the first patient suffered from a severe erythema accompanied by fever, and that the second, although having no rash, yet experienced a rise of temperature and a slight sore-throat upon one day. The conclusions are that it is very doubtful whether feeding on fresh pancreas or the subcutaneous injection of liquor pancreaticus is of any benefit in diabetes mellitus.—*British Medical Journal*, 1893, No. 1679, p. 452.

The Influence of Massage upon the Rapidity of the Absorption of Therapeutic Substances.—Jawadski has observed the rapidity of the absorption of toxic substances in dogs under the influence of massage, and has obtained the following results, which we analyze briefly:

1. Massage made in the direction of the heart accelerates the absorption of the liquid substances introduced beneath the skin.

2. It augments considerably the effect of these substances. From a therapeutic standpoint this fact is of great importance, as a small dose of a medicament associated with massage may yield the same results as a larger dose without massage.

3. The longer the massage is continued the more rapidly are the effects manifested.

4. The quantity of the injected liquid has no marked influence upon the rapidity of the absorption during the massage.

5. Massage of the corresponding portion of the opposite side of the body has no influence upon the rapidity of the absorption.

6. Massage produces a dilatation of the blood-vessels of the organ to which it is applied.

7. When the sciatic nerve is divided, the liquid which is injected below the point of the section is absorbed with greater rapidity.

The influence of massage upon absorption is not due to the production of vascular constriction or dilatation owing to the irritation of the peripheral nerves. The dilatation is produced mechanically, and, the blood of the region being forced into the general circulation, more rapid absorption results.—*Vrach*, No. 30, 1892 (*New York Therapeutic Review*, April, May, and June, 1893).

Trional and Tetronal.—As the result of a comparative clinical study, Mabon (American Journal of Insanity, vol. xlix, No. 4, p. 579) arrives at the conclusion that both trional and tetronal possess decided hypnotic and sedative activity. Trional appeared to be the more serviceable as an hypnotic for the insane. On the other hand, small doses of tetronal appeared to yield the best results as a sedative. As a rule, the sleep that results is calm and quieting, and resembles natural sleep. In a few instances unpleasant after-effects were noted, but they did not continue long and were not at any time alarming. The action of the heart was not depressed. In the majority of instances a dose of 15 grains of trional given in hot milk at bed-time was sufficient, in from fifteen minutes to two hours, to produce sleep of from six to nine hours' duration and unaccompanied by dreams. The same results were obtained from a like dose of tetronal. Both drugs displayed the power in some cases of producing sleep on two consecutive nights after a single administration. The dose of trional for hypnotic purposes is from 10 to 30 grains, but it is advisable to begin with 15 grains; for a sedative effect, from 10 to 15 grains at least are required, but in some patients not even 45 grains will produce the desired effect. The dose of tetronal for hypnotic purposes

from 5 to 30 grains, but in the majority of ases 15 grains will be required; for a edative effect, 5 to 10 grains, once or twice day, will generally prove beneficial.—*Medal News*, May 6, 1893.

Euphorbia Pilulifera in Asthma.—The value f this drug in a large percentage of what re recognized as chronic asthmatic cases is ot generally known to the profession. In rder to further the good work, it is suggested iat this remedy be given a trial. The dose from 20 to 30 drops in water, and, where idicated, the iodide of potassium may be ombined with it—5 grains to be given with ach dose of the euphorbia. There are some bjections to its use, among which should be entioned the fact that some patients cannot take it, and, as the coloring-matter affects ie kidneys, it should be given with caution hen these organs are diseased. The most attering reports have been published reting to its therapeutic value, not only in is country but abroad, and it is said to rm the basis of several proprietary remeies for asthma.

"Cresol Saponate," a New Antiseptic.—This reparation resembles lysol, but is less colred and of a less disagreeable odor, besides eing as satisfactory as the best pure lysol. is prepared as follows: Pure soft soap Ph. G.) is melted in a dish on a steam bath, nd mixed with an equal quantity of clear rude carbolic acid. The solution immediely resulting is heated, until it remains ear upon cooling and dissolves in distilled ater.

It is a clear, Madeira-colored fluid of neual reaction, of the specific gravity of 1.060, nd clearly soluble in all proportions in ater, alcohol, or glycerin. The slight louding which appears on dissolving the rug in alcohol and chloroform is removed y one single boiling up.—Dr. Burckhardt, *Centralbl. f. Gyn.*, 1893, No. 4.

Strophanthus in Pruritis.—Azua has found e tincture of strophanthus useful in pruritis ue to stasis of the circulation in the papillary ayer of the skin, as observed in some cases f cardio-pulmonary diseases. He tried it n seven such cases, and in one of itching aused by jaundice. In the latter it had no ffect whatever, but in the others a cure was ffected by giving 12 drops twice a day r seven or eight days. He cites the case f a man, aged 70, suffering from emphysema nd dilatation of the heart, who had most roublesome pruritis for months. One week's administration of this drug completely relieved the itching. Such being the case, Azua believes that strophanthus exercises a specific action on the nerve-endings.

Therapeutic Effects of Suggestion in Insane Asylums.—O. Binswanger (Therap. Monatshefte, March and April, 1892) concludes that suggestion is valuable in some forms of psychical disturbance, but only favorably affects those patients who suffer from alcoholism, morphinomania, and hysterical melancholia. Other forms are rarely benefited by it. In simple alcoholism it is only an auxiliary means. In melancholics the results are much more important, but their permanence is questionable. In some sexual disturbances, although a few good results were obtained, failure is usually the rule.—*Therapeutic Review*, April, May, and June, 1893.

Bromoform in Whooping-Cough.—Mr. F. W. Burton-Fanning recommends this remedy, which is conveniently dispensed in the proportion of 1 minim, suspended in ½ drachm of compound tragacanth powder, the same quantity of simple syrup, to which 3 drachms of water is added. The dose varies from ½ minim for children under one year, to 2 minims up to six years, given thrice daily. These doses may be gradually increased to twice the quantity. The bottle must be kept in the dark, and shaken before each dose.—*The Practitioner*, 1893, No. 296, p. 100.

Defecation by Cascara, etc., for Nervous Prostration and Other Disorders.—Dr. Charles A. Wilson, of Rochester, Ind., writes: "About a year since, I discovered, to my satisfaction, that fæcal matter retained in the sacs of the colon was the cause of nervous prostration, dyspepsia, spinal irritation, insomnia, and many other functional disorders. I have used Cascara Cordial (P., D. & Co.'s) with tinct. digitalis and thorough irrigation of the colon, thrice a week or oftener, with the most gratifying results."

Creasoted Witch Hazel in Gonorrhœa.—The St. Louis Medical and Surgical Journal states that a 1-per-cent. solution in a hamamelis decoction has had good results in gonorrhœa.—*Medical Standard*, May, 1893.

Antitoxin.—A ninth case of undoubted tetanus is reported by Finotti as cured with the Tizzoni-Cattani antitoxin in dose of 25 centigrammes at each injection.—*Rif. Med.*, Dec. 12, 1892 (*Medical Record*, May 13, 1893).

Medical Progress.

THE GROWING POPULARITY OF PHYSIOLOGICAL REMEDIES.—Abroad and at home physicians are taking a very great interest in what are termed physiological remedies.

The London Lancet and British Medical Journal teem with reports, and consider physiological remedies the greatest therapeutic triumph of the age.

To quote from the London Lancet, Feb. 4, 1893:

"Those who were fortunate enough to be present at the last meeting of the Clinical Society of London had the advantage of seeing living examples of what cannot but be considered as one of the greatest therapeutic triumphs of the age. This is no exaggerated description of the marvelous effects of the treatment of myxœdema by the internal administration of the thyroid gland or of an extract made therefrom. The patients exhibited by Drs. Arthur Davies, Pasteur, and Calvert had, within a few weeks of the commencement of the treatment, presented all the characteristics and symptoms, physical as well as mental, of typical myxœdema; and, according to what is known of the natural history of this remarkable affection, they would have been fated to pursue a continuously downward course had they only been met with in the earlier years of the recognition of the disease. It is, of course, too soon to speak of the recovery from the marked symptoms in these cases as permanent; but at least it can be said that the results of this treatment exhibit nutritional changes of a wide-reaching order and open up a vista of the possibilities of the treatment of chronic disease which is wholly novel and striking. As to these particular cases, it may be remarked that they were treated on the same principle, but with differences in detail. Dr. Davies availed himself of a powder prepared by the desiccation of a glycerin extract of thyroid glands; Dr. Pasteur administered portions of thyroid gland in the raw state at given intervals; and Dr. Calvert's patient was similarly given portions of fried thyroid. Dr. Murray, of Newcastle, was present at the meeting and recapitulated his experiences on subcutaneous injections of thyroid extract. It would seem that in any one of these ways of administration the result is much the same. Within a short time of the commencement of treatment the patients begin to lose the characteristic phenomena of the disease. Not only do their features lose the puffy character, but their hair begins to grow again and their intellect to brighten. Thes obvious indications of improved nutrition ar accompanied with an increased discharge c urea, a very marked loss in weight, and general sense of improved health. N doubt full records of these and other case will in due course be laid before the Clinica Society, which has done so much to diffuse knowledge of this affection. The earlies cases were related before this Society by Si W. Gull, and then came Dr. Ord's contribu tion to the subject, and finally the exhaus tive report of the special committee. Is i not worth while to reappoint that committe so that it may supplement its previous labor by a study of the new development of th subject?

"The history of this mode of treatment o myxœdema is an excellent example of de ductive reasoning. To Mr. Victor Horsely we believe, belongs the credit of suggestin that this "cachexia strumipriva" might b rationally relieved by means of transplantin a thyroid body or portions of it from the liv ing sheep into the subcutaneous tissues of th myxœdematous subject. The hint was acte on both in this country and abroad, but onl with equivocal success. About twelv months ago Dr. W. Murray conceived th idea of injecting subcutaneously the sup posed active principles of the thyroid glan by using a specially prepared extract, an his results were far more successful tha those of thyroid-grafting. Then more re cently Dr. Hector Mackenzie, at the Roya Free Hospital, treated myxœdema by simpl feeding the patient on thyroid glands, and a his suggestion there was prepared a pharma ceutical preparation to be administered b the mouth, which was that used by Dr Davies. In all cases the result was th same, so that there is no escape from th conclusion that, whatever its precise path ology, the thyroid gland does impart to th blood something which neutralizes the tend ency to myxœdematous degeneration an even removes the latter after it has bee produced. It is this which is a new fact i therapeutics, and it is gratifying to find s striking a confirmation of a theory base upon experimental and clinical observation None the less is it highly remarkable, for i shows, as we think Dr. Ord originally sur mised, that the whole secret of the physica and mental deterioration lies in the exces of mucous degeneration of the connectiv tissues.

"Whenever any new remedy is tested, th first and most natural inquiry must be as t whether it exerts any noxious influence suffi cient to counterbalance the advantages of it

emedial action. Now in the matter of this eatment of myxœdema, it seems at first ight that changes so rapidly induced can nly be effected at some risk to the vital owers. So far as these cases go to prove, owever, it is not so much the rapidity with hich the improvement takes place as the uantity of the substance administered that s open to risk. It is a question of dosage, ust as is the case with any other remedy. This was proved in Dr. Pasteur's case and in ne mentioned by Dr. Ord. An excessive lose or too frequent repetition of the quanity given produced cardiac irregularity, yncopal attacks, and other alarming symptoms. It is as well to draw prominent attention to this, since there seems to be no eason why a successful result should not be ttained with a carefully guarded administration. Is the "cure" permanent? It is remature to speak affirmatively with regard o this point. Dr. Murray intimated that when the injections were withheld the patients were liable to relapse. Dr. Pasteur, on the other hand, had observed no such falling back after the treatment had been suspended for a time. As to the best form of administration, seeing that such excellent results are obtained by the simple consumption of the thyroid gland, it would seem unnecessary to use it in the form of extracts for hypodermic injection or even as a powder for administration by the mouth.

"It is by no means improbable that cases such as these will give an impetus in the direction of the use of animal extracts for the treatment of chronic diseases; but we are far from sanguine of good accruing therefrom. Indeed, ever since Dr. Brown-Séquard introduced to notice his observations upon the tonic and restorative action of the subcutaneous injections of testicular juice, there has been a growing tendency to look for remedies in this direction. We are far from denying that the method is wholly inoperative, although we may be skeptical as to its power to avert natural decay."

Manufacturers abroad are already supplying a pharmaceutical preparation of the thyroid gland which is claimed to be a specific in myxœdema, and we learn that Parke, Davis & Co. have been experimenting with this and other physiological remedies and were the first drug-manufacturers here to introduce them to the profession.—*Medical World*, May, 1893.

YELLOW AND BILIOUS FEVERS.—In almost all epidemics of yellow fever there occur a number of cases of disease in which the diagnosis rests in doubt, and which are variously reported as bilious, remittent, or yellow fever, according to the prejudices of the attending physician or of the sanitary authorities. There are physicians practicing in all tropical countries—usually those who have migrated thither from temperate regions—who look upon every case of severe fever, not of a distinctly continuous type, as yellow fever; while others—and these are generally natives—are as loath to admit the existence of yellow fever in their locality as are certain practitioners in our own country to acknowledge the prevalence of malarial fevers in their own neighborhood. There is, however, no real justification for this confusion, for nearly all authorities on tropical diseases are in accord in the statement that, however closely these two affections resemble each other, they are, nevertheless, entirely distinct morbid entities, and are perfectly capable of being differentiated clinically by competent observers.

In a recent monograph, Dr. Domingos Freire, of Rio de Janeiro,* returns to this subject and seeks to demonstrate that the two diseases are distinct, bacteriologically as well as semeiologically. In typical cases the symptoms of the two diseases are so different that an error in diagnosis could hardly be made. Yellow fever presents three clearly marked stages, namely: an initial one, of fever lasting from twenty-four to forty-eight hours; a second stage, of apyrexia of variable but always brief duration; and a third period, when the fever returns and the peculiar ataxo-adynamic, icteric, and hæmorrhagic symptoms appear. In bilious fever, on the other hand, the fever is frankly intermittent or remittent, and the jaundice is present from the first. The characteristic facies of yellow fever, giving the patient the appearance of one intoxicated, is wholly absent in bilious fever. The vomiting is present from the beginning in bilious fever, and the ejecta are of a yellowish or more or less intense green color; whereas in yellow fever the vomited matter is at first watery and later becomes black, and the vomiting does not cease, as in bilious fever, with the subsidence of pyrexia. In bilious fever the stools are of a yellow or green color, and there is diarrhœa often throughout the entire course of the disease; but in yellow fever constipation is the rule, diarrhœa coming on only toward the close. In yellow fever the liver and spleen are not enlarged, unless there have been previous attacks of malarial disease, but they became

* Sur l'Origine Bactérienne de la Fièvre Bilieuse des Pays Chauds, par le Dr. Domingos Freire. Rio de Janeiro, 1892.

fatty degenerated; whereas in bilious fever hyperæmic enlargement is the rule, but fatty degeneration is absent. Finally, quinine modifies, and in favorable cases even cuts short, an attack of bilious fever, but has no favorable influence upon the course of yellow fever.

It is well known that Dr. Freire claims to have discovered a micrococcus which he regards as the specific organism of yellow fever—a claim which has, however, been disputed by others, notably by Dr. Sternberg, of the United States Army. He has now isolated from the urine, blood, and bile of patients with bilious fever a non-motile bacillus, 9 micromillimeters in length and 3 micromillimeters in breadth, sometimes slightly curved, and staining readily by methyl-violet. These bacilli resemble closely, if they are not identical with, those found by Klebs and Tommasi-Crudeli in the blood of persons suffering from malarial fever. Segmentation of these bacilli occurs with great rapidity, and each segment gives rise to a spore at one extremity. The bacilli are accompanied by a large number of mobile, highly refractive spores, ranging in size from 1½ to 2 micromillimeters, transparent like the bacilli, and surrounded by a luminous circular areola. Inoculation of guinea-pigs with cultures of these bacilli gave rise to a fever of remittent type, and examination of the organs after death showed the characteristic lesions of bilious remittent fever.

The author insists upon the differences found by him in the bacteriological study of those two diseases as of great importance in their differentiation, the micro-organism in one case being a bacillus, in the other a micrococcus. He concludes, therefore, that bilious and yellow fever, however closely they may resemble each other superficially, are two entirely distinct diseases, whose differences may be demonstrated both clinically and bacteriologically. The importance of being able to make such a differentiation, appeals with equal force to the therapeutist and to the sanitarian, and it is to be hoped that the subject will receive full consideration during the coming Pan-American Congress.—*Medical Record*, May 13, 1893.

THE INOCULABILITY OF LEPROSY, AND VACCINATION.—In a recent number of the Centralblatt für Bakteriologie, Max Wolters gives a concise and at the same time very exhaustive summary of what is at present known of the leprosy bacillus, with special reference to its etiological importance and the possibility of its acting as a direct source of infection by means of inoculation. This critique appears at the most opportune time since lately the subject of the inoculability of leprosy has been prominently brought before us by a section of antivaccinationists who assume that leprosy not only may be but has largely been, transmitted by means of arm-to-arm vaccination and inoculation with human lymph. Wolters has collected all the facts for and against this assumption and shows in an admirable and impartial exposition that experimental evidence is decidedly opposed to the doctrine of direct inoculation, and hence also of "invaccination."

Many have tried to produce leprosy in animals by means of inoculation or implantation of leprous material. The result has been failure. Various species of animals (monkeys, dogs, cats, goats, rabbits, guinea-pigs, mice, pigeons, eels, and frogs) have been employed, and though the mode of infection has been varied in every possible manner, and though some of the animals have been under observation for months, leprosy has not been produced. What usually happens is that the implanted nodule is absorbed. Neisser and Damsch claim to have produced local leprous lesions, and so also Vossius. They found that after an implantation, granulation tissue appeared around the nodule (a granuloma), and that numerous bacilli could be observed in and amongst the cells and leucocytes. Campana and others, notably Wesener, while controlling these experiments, have shown that a multiplication and proliferation of the bacilli does not take place, and that the bacilli found are merely the organisms originally introduced. In any case, it must always remain a significant fact that in all these implantation experiments the rest of the body was quite free from any pathological changes whatever. The only investigators who claim to have produced actual and general leprosy in animals are Melcher and Ortmann, but their results have been questioned and are open to doubt. It is very probable that their rabbits died, not from leprosy the result of inoculation, but from tuberculosis. Wesener, who has carefully gone over the same ground, and critically controlled the experiments of Melcher and Ortmann, concludes that a proliferation of the leprosy bacilli does not occur, but simply a diffusion over the body of the numberless bacilli introduced; and he considers, with Hüppe, that, like so many others, the two Königsberg experimenters "have sown leprosy and reaped tuberculosis."

Wesener, Leloir, and Campana have fur-

ner shown that results identical with those escribed by Vossius and Damsch are obtined on implanting leprous material hardned for years in alcohol. Hence it is all ut proved that Damsch and Vossius did by o means produce a local leprous lesion.)ead leprosy bacilli, even after having been ept in alcohol for years, are extremely reistant, retain their structure and shape and taining reaction. After weighing all the xisting evidence, we are forced to agree ith Besnier that leprosy cannot be transnitted to animals.

How is it with man? Wolters shows that ttempts to infect man by means of artificial noculation or implantation have in no case iven a trustworthy result free from objection and above criticism. Danielssen experinented on himself, and inoculated himself n at least four different occasions, and he lso operated on twelve subordinates of his, nd a number of patients suffering from yphilis and favus. He failed, and so did Holst and Profeta, and also Jitsch, who exerimented on ten individuals. The physiian mentioned by Leloir, who inoculated imself and twenty others, was equally unsucessful.

Arning's well known case is the only one vhich has the appearance of success. But ven that is beset with doubt. Arning himelf does not consider his experiment a rucial one, and allows that there are some bjections to be raised. In this instance the ncubation period was extremely short and he duration of the disease brief; it was not hown that Arning's man was free from eprosy at the time of inoculation. That he vas diseased was quite possible, when we remember that there was a strong racial and amily predisposition, and that several members of his family actually had leprosy. After death it was impossible to prove that he infection had taken place from the seat of inoculation; and again, we do not even know that the implanted nodule contained any living leprosy bacilli. For it must be remembered that it is quite possible, if not probable, that the bacilli contained in leprous nodules are dead, as Cornil, Wesener, and other skilled and experienced observers maintain.

It is evident, then, that so far there is no experimental proof of the direct transmission of leprosy by means of inoculation from man to animal, or from man to man. Yet we are asked to believe that vaccination is a potent factor in the dissemination and recrudescence of the disease. Vaccination from a leper is nothing more or less than an experimental inoculation, and it is therefore not surprising that as yet no instance of "invaccinated" leprosy has been recorded which in any way could be considered convincing, and we cannot therefore take the outcry of a few anti-vaccinationists seriously until they are able to produce positive cases of "invaccination" of leprosy less equivocal than the oft-quoted cases of Gairdner and Daubler.—*British Medical Journal*, April 29, 1893.

TREATMENT OF BUBO.—Success in the treatment of bubo depends very largely on the rapid removal of the cause of irritation or inflammation of the glands, or at least in changing the cause from a virulent to a simple ulcer, so no fuel is added to the fire on one side while you are trying to extinguish it on the other side. So when the patient makes his appearance with buboes dependent on chancroidal ulcer of the penis, apply pure carbolic acid to the chancroid, then pure nitric acid thoroughly, so no part of the sore has been neglected. Then wash off the ulcer with a solution of bicarbonate of soda or soapsuds. By this means the chancroid is converted into a simple sore, and the lymph channels will no longer carry virulent germs to the lymphatic glands in the inguinal region.

The ulcer can then be treated by your favorite antiseptic powder, as aristol, europhen, calomel, boric acid, salicylic acid, etc. If possible put the patient to bed, give epsom salts, and paint the parts locally with iodine, pure or mixed with equal parts of glycerin. Or, may apply mercurial ointment or plaster to the buboes, or lay a large dry sponge over the bubo and apply a bandage over this, and then lift the bandage and wet the sponge, instructing the patient to keep it wet; by this means there is compression applied to the enlarged glands and they often disappear. Again, if he will lie in bed, may apply a bag of shot or salt or sand over the bubo for the same purpose. Again, may blister the inguinal region.

These methods can only be used before there is evidence of suppuration. Before suppuration has been detected, or even after its appearance, often injection into the inflamed glands of from 5 to 10 minims of 2-per-cent. solution of nitrate of silver has a happy result, the enlargement and inflammation subside rapidly, even if the patient continues going about.

If these abortive methods are unsuccessful, then if you can get the patient's consent, by all means operate; with antiseptic precautions, remove the glands and pus. The

safest way to enucleate the glands is with the fingers. If there is much evidence of disintegration, then apply a 10 per-cent. solution of chloride of zinc, followed by aristol and sewing up the wound, leaving the lower angle open through which to drain with aristol gauze or rubber tube, and apply antiseptic dressing. If the inflammation only involved the upper layer of lymphatics, remove them and curette the connective tissue, washing out with bichloride solution, and sew the external wound, and in most cases it will heal by first intention in a week or ten days. Again, as most patients refuse an operation which necessitates an anæsthetic, you may make a small incision into the fluctuating bubo and wash it out with peroxide of hydrogen until there is no more foaminess of the returning fluid, and then pack with aristol gauze or bichloride gauze. Repeat this washing and dressing every other day, and most cases it will heal in about two weeks. If the suppuration persists, you may know that the deeper glands are involved, and you may thus get the patient's consent to an operation as described above. If not, continue the flushing of the cavity with peroxide, or may change to 1:2000 bichloride solution, or 1:20 acid carbolic, and the cavity may fill in more rapidly. Watch for another abscess forming in other portions of this chain of lymphatics, due to the spread of the inflammation, and make an early incision, wash out and if possible connect the two suppurating foci by a drainage tube, blow into the cavity aristol or europhen, and they will gradually heal.

Those sympathetic buboes dependent upon chancre or gonorrhœa rarely suppurate, and as the cause is treated they disappear rapidly when the result of gonorrhœa, and very slowly if due to chancre. We may find enlarged, painless lymphatics in the groins months after the disappearance of the initial lesion of syphilis.

The buboes found below the fold of the groin are due to some irritation of the lower extremity, as an ingrowing toe nail, inflamed bunion, ulcer of the leg, etc. They rarely suppurate, but generally disappear under compression, iodine, etc., or no treatment whatever, if the cause of their enlargement is removed or properly treated.—Henry Jacobson, M.D., in *The Clinique*, St. Louis, Mo., May, 1893.

CERTAIN NEW METHODS OF TREATING ERYSIPELAS.—The author (M. Cheron) briefly reviews some of the newer methods of treating this malady which have lately been put forth. Sachs recommends applications of ichthyol in collodion (10 per cent.), painted on at least 2 cm. outside the limit of the disease. Luigi d'Amore applies terebinthine with a brush, and then covers the area with cotton. Casagaussi recommends bathing the part every three hours with a solution composed of one part each of tannin and camphor and eight parts of sulphuric ether. He also recommends one-per-cent. solutions of fuchsin. Tichomiron uses iodine applications three or four times a day. Iodide of glycerin or iodized glycerin is of service for mucous surfaces. Bourbon employs aconite internally, one-tenth milligramme every two hours, not exceeding one milligramme in the course of the twenty-four. Halo has successfully prescribed pilocarpine in the erysipelas of children. Hacker has found satisfaction with hourly frictions of cocaine in oil of cacao. Foustanos has suggested the systematic employment of analgesin in erysipelas, and the external use of an ointment of phenic acid and finely powdered camphor in lanolin and vaselin.

Finally Guyot and Gaillard have employed corrosive sublimate in accordance with the following rules:

1. The remedy should be used in a one-per-cent. ethereal solution.

2. A hard atomizer should be used of such device as to give a forcible spray.

3. Care should be taken to note the degree of sensitiveness in the skin and the extent of the skin infiltration.

4. Vesication of the skin by this method need cause no anxiety.

5. The applications should be extended about one centimeter outside of the affected area.

6. Care should be taken to apply the remedy very lightly over the tumefied upper eyelids, but the space between the eyelids and above and outside of the orbit should be very thoroughly heated so as to prevent, if possible, the spread of the infiltration up to the hairy scalp.

7. The face should be subsequently swathed in borated compresses.

8. One or two treatments suffice when they have been sufficiently thorough. Upon the neck, back, abdomen, and extremities, the applications should be much longer than upon the face.

The collaborator believes that the sublimate method offers more promising results in the majority of cases than any other.—*La Tribune Médicale*, Dec. 8, 1892.

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Original Articles.

DILATATION OF THE PYLORUS.

BY HAL C. WYMAN, M.S., M.D.*

Mr. B——, aged 60 years, of previous good constitution and general health, began to suffer attacks of dyspepsia about one year ago. During these attacks he would suffer great pain in the epigastrium, lasting an hour or more after eating, and was annoyed by eructation of gas and sometimes vomiting of mucus. The attacks occurred at first about once a week, but gradually increased in frequency until they were almost uninterrupted. With this change there came occasional vomiting of very fetid, partially digested food, and absolute intolerance of anything solid as nourishment. He emaciated gradually. Three months ago his dyspepsia was aggravated by an attack of pluerisy and lumbago, which reduced him to his bed. The vomiting became more regular. Food would be thrown up regularly after being in the stomach a few hours. A physical examination discovered tenderness on pressure over the epigastrium, and the sense of touch seemed to recognize an indistinct hardness in the region of the pylorus. The signs and history pointed to pyloric obstruction, the result of cicatrization. The gradually failing strength indicated that a fatal termination of the case must be near.

To ascertain the absorptive power of his stomach, he was given 3 grains of iodide of potash in a gelatin capsule, and after ten minutes strips of blotting-paper sized with boiled starch were moistened with his saliva and then touched with nitric acid, revealing the blue color indicating the presence of iodine in his saliva, whither it must have come by absorption from his stomach. Free hydrochloric acid was found in his stomach by the tests commonly resorted to, but the quantity appeared to be small.

Repeated washing of his stomach by means of the stomach tube and peroxide of hydrogen did not materially improve his condition.

Trial meals were invariably rejected from the stomach, partially digested. Milk alone of foods appeared to pass through the stomach in small quantities, and to keep up his strength. His bowels were constipated, his temper fretful, and his future hopeless unless something were done to get the food to pass the pylorus. Rectal feeding was attempted, but in a few days the bowel became so irritable that this had to be abandoned.

Divulsion of the pylorus was advised. He accepted it as the only hope of prolonging and possibly saving his life. I had his abdomen shaved, and then washed with soft soap and alcohol. After giving him chloroform until he was insensible, I made an incision in the median line, commencing 1½ inches below the ensiform cartilage, and 3 inches in length. Through it the abdomen was opened. My finger was now introduced and the pylorus and stomach explored. The former organ was found very hard and slightly enlarged. The gland adjacent to the stomach felt normal. The stomach was partially drawn through the abdominal wound; an incision one inch in length was made in the least vascular part of the pyloric end of it; my index finger was passed through this, and the pylorus was felt to be not larger than a slate pencil and very hard. I introduced a uterine divulsor and gradually stretched the stricture until the tip of my finger would enter. Then it was stretched until the finger passed freely. The wound in the stomach was now closed by continued silk suture, and the stomach restored to the cavity of the abdomen and covered with omentum. The abdomen was closed with interrupted sutures. The wound was dressed with powdered iodoform and plain gauze,

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covered with cotton and held by a many-tail bandage. Time occupied by operation, forty-five minutes.

Patient rallied promptly; was given rectal enemas of coffee every four hours, but was allowed nothing in the stomach for forty-eight hours. His bowels moved freely six hours after the operation. He suffered great pain for the first twelve hours, but was given no morphine. Hypodermatics of cold water were given to ease the pain, and with some success. Subsequent recovery from the operation was uneventful. The vomiting and pain have disappeared, and the patient is gaining flesh and strength.

A FEW POINTS OF INTEREST TO THE FAMILY PHYSICIAN.*

BY JOSEPH EASTMAN, M.D., LL.D.

It is more or less presumptuous for a specialist to attempt to teach the general practitioner—for two reasons: *First*, a large percent. of general practitioners are capable of furnishing more pointers to the specialist that he could use in his business than the specialist could furnish to the general practitioner. *Secondly*, so many epistles have come from gynæcological apostles in the past few years, intended for the edification and education of the general practitioner, that the man who makes his living by doing family practice is beginning to seriously reflect upon what relation he bears to the specialist.

Had I not for fifteen years been actively engaged in general surgery and medicine, nothing could have induced me to place my foot into this field which is really suffering from intense cultivation; but now that specialists in gynecic surgery are starting up in almost every county seat, I think it might be well to "tap the wheels" and elicit if possible the ring of solid metal or perchance the dull sound which indicates a crack in the wheel of our rapidly-moving train. Those of us who have opened the abdominal cavity many hundred times and tested our asepsis in the great lymph sac, have picked up many little points pertaining to aseptic and antiseptic precautions of much value to the general practitioner. He has, however, often been led to believe that there are two separate and distinct factions, the one contending for and the other against antiseptics. There are no differences. "All are but parts of one stupendous whole." Therefore he has the right to throw the blame on the cœliotomist for his having committed a sin of omission, not using enough soap and water; or a sin of commission, having depended too exclusively on his bichloride solution and thereby failed to scrub (sterilize) his hands, and even poisoning his patient with the deadly drug. The greater our experience and more marked our success, the keener we should feel the weight of responsibility resting on us for what we teach. Reckless expressions as to methods of operating, treatment of cases, or results obtained, are most reprehensible, even criminal, for in this way lives are sacrificed.

The student of human nature and the earnest seeker after truth can see the motives of those who insist that any kind of water is as good in surgical cleanliness as that which has been sterilized, or teach in their published statements and attempt to prove by their success that private hospitals are useless; that the same success can be obtained in the filthy hovels of the city; that nurses who have had a large experience in supplementing the efforts of the abdominal surgeon, with their wisdom obtained by observation, are no better than such nurses as one can pick up. What is the difference if, in the use of chemical agents which destroy micro-organisms, we advance a step farther and say prevention is better than cure, or that the prevention of fermentation ("sterilization," "asepsis," "clean surgery") is better than allowing fermentation and putrefaction to swarm with microbes and then seek to kill them with chemical agents?

There is no difference in the ultimate aim of those contending for antiseptic surgery and those who claim to be content with clean surgery, for the reason that cleanliness cannot be secured and maintained without the aid of chemical agents of some kind. No wonder some of our surgical friends get blinded in the technique of antiseptic surgery. While wandering in their blindness

*Abstract of a paper read by title before the American Medical Association, at Milwaukee, June 8, 1893.

they forget the principles enunciated by the great masters like Lister and Kieth. These men proved by scientific research that all fermentation is molecular life. What use would there be in the sterilization of every instrument used in a pelvic abscess if we forget that pus cavities after being exposed to the air become a hot-bed for the production of germ life through fermentation and putrefaction? Of what use would all the antiseptic dressing be over an abscess as compared with perfect drainage—that precious safeguard against absorption?

Our apostles of clean surgery are exceedingly careful as to who clean their sponges; do not allow any decaying substance in their private hospitals, knowing that no sooner does one decaying substance die than it begins to live again in molecular germ life, the prolific offspring of fermentation and putrefaction. Clean surgery is what we want. How shall we obtain it? By water? No; it cannot be thus secured. Suppose one of these gentlemen drops blood, pus, or serum on his clothing, or gravy on the lapel of his coat. Will water remove it? No. Try soap, ammonia, ether, benzine. Ah, it takes chemicals to secure cleanliness. The difference between those favoring and those opposed to antiseptics is largely imaginary—a play on words. We can get it, but not without the aid of chemicals. By this I do not mean such agents as are usually considered germicides. I doubt the propriety of killing germs lest we irritate the tissues.

These pretended differences between sepsis and antisepsis can but confuse the average general practitioner or the beginner in surgery. For example: My friend, who had located in the far West and had been doing some surgery, returned to make his friends a visit; found his way up to my operating-room and was noticing our preparation for work. As I had once been his teacher, I began answering his questions by explaining to him that the hands were the most frequent source of conveying septic material into the peritoneal cavity, and that for the past ten years I had been studying how to clean my hands; that now I had a soap made by a chemist with olive oil and caustic potash, practically the green soap of the Pharmacopœia. I showed him my scrub-brush for the hands, which is boiled every time after being used, and then kept in alcohol and ready for use again. With this soap and brush, and a stream of running water from a spigot, I could scour my hands with only the hope of making the microbes so blinded, sickened, and weakened that the running water would wash them off the deck of our surgical ship. I explained how it takes repeated rinsings to get rid of the soap-suds from the pores of the skin before we dare venture within the abdomen. He answered me: "I have no use for all your details. I simply put my hands in the solution of bichloride of mercury, and then I know I am safe." I attempted to reason with him, stating that if I used a germicide for the hands it would be the aqua ammonia, which would not only bring tears to the eyes commensurate to the solemnity of the occasion, but would penetrate deeply into the pores of the skin, chasing the microbe home, and by its extreme alkalinity, if not killing him outright, weakening him until he would be comparatively harmless; whereas his bichloride of mercury would by its astringency close the pores of the skin, thereby shutting the door after the microbe which it had frightened into its den. This doctor believed that there were two factions, and had chosen the chemical side of the question.

I read in a medical journal an article by one evidently willing to teach the average doctor. In this article he described the bleaching method much used in the Johns Hopkins Hospital and other places. He says: "Making the hands brown in a solution of permanganate of potash, then immersing them in a solution of oxalic acid until the color of the potash is removed, the hands will be of a pink color." Here it is that "a little knowledge is a dangerous thing." The pink color is evidence that the acid is retained deeply in the pores of the skin of the hands, even after repeated rinsings under a stream of running water. Such hands put into the peritoneal cavity would be dangerous. Aqua ammonia applied freely will prove the presence of acid by making as much lather as could be made with a good article of soap. This repeated a few times, the pink color is gone and the hands are anæmic. The alternate flushing and shrinking of the capillaries, no doubt helps to ster-

ilize the hands. It could be as well done by alternately immersing the hands in cold and hot water.

Another friend asks me to meet him in consultation, his patient having been confined a few weeks before. He fears peritonitis and yet thinks it not possible, as the temperature has not been above 101°, though the pulse is 140, wiry and feeble. The abdomen is badly distended. The pulse, the tongue, and the countenance all point to septic peritonitis and death. Following the doctor I made a careful examination of the case. I asked for some soap and water to wash my hands. They furnished a piece of soap which had probably been selected not because of its known chemical composition, but because of its recommendation in the newspapers, including a certificate from a Brooklyn minister. The water given me was hard, containing much lime, magnesia, etc. I whispered to my friend that I could not remove septic germs from my hands with such material. He immediately brought his satchel, and, after handling nearly everything in it, gave me some tablets of bichloride of mercury to put in the water, and thereby to increase the chemical composition of the water and render it more worthless in cleansing the hands. After handling everything in his satchel he washed his hands in a solution of bichloride.

Now, had he carried a hand-brush, boiled every time it had been in doubtful use, a vial of aqua ammonia to soften the water, and a piece of soap made of olive oil and caustic potash, imitating the time-honored soft soap of his grandmother, his armamentarium for sterilizing would have been nearer to my notion.

There is something in soap. I ask the man in the alley back of my stable what he is going to do with the putrefactive, maggoty carcass of a dead dog he has laid in his cart. His answer was that he hauled them to the soap factory. I repeat, there is something in soap. I insist there was a good deal in that soap. The nearer we stick to the religion and soap of our grandmothers, the nearer we will approach moral and physical cleanliness of body and mind.

This good doctor was deceived as to the disease by too implicit reliance on his thermometer. I have many times seen a patient with septic peritonitis go down and die, the thermometer not swinging a red lantern signaling a wreck ahead, while I have never known a pulse to deceive me. We had in the profession more good pulse-feelers before we had so many thermometers.

I get into my friend's buggy to ride home. He buttons up two coats, strokes down his long full beard with hands and sleeves teeming, as I believe, with germs of septic peritonitis, then puts on a heavy pair of warm driving-gloves which had done him service two winters—surely nothing but fire could ever sterilize them. Five days later my good friend rushed into my operating-room as we were getting ready for an abdominal section, waving these same driving-gloves in his hands. I asked him to retire. He did so, but remarked that he had changed his clothes. This doctor's antiseptic precautions were faulty because of too implicit reliance on germicides, which led him to overlook the fact that any microbe having the least particle of self-respect would not attempt to stay where soft water, clean scrub-brushes, plenty of elbow grease, and repeated changes of clothing were customary.

The doctor's change of clothes was not satisfactory to me so long as the gloves were used into which he had placed his hands after examining the case of puerperal septicæmia. It requires the utmost painstaking to have our chain of antiseptic precautions strong in its entirety. "No chain is stronger than its weakest link." In studying septic precautions and applying the principles in our practice, we often strain at a gnat and swallow a camel. This being true of those who are specially engaged in intraperitoneal work so that the least deviation from the strictest asepsis will be detected in the results obtained, how much more likely is he who is engaged in general work to overlook some important detail in the change of clothing, and especially in what he is handling with his hands, including the gloves!

It was taught in former years that the obstetrician should stop practice after attending a case of epidemic childbed fever. These cases we now believe to have been puerperal septicæmia; and despite my unbounded confidence in soft water, soft soap, scrub-brush, ammonia, turpentine, and alcohol, I am of

the opinion that no man is warranted in opening the abdominal cavity or attending an obstetric case within five days after his hands have been in contact with a case of septic peritonitis, if that peritonitis is at all in any possibility in its acute stage, and not even after the expiration of five days unless in this space of time there shall have been repeated changes of clothing, daily scrubbing of the hands and arms with soft soap, soft water with ammonia poured into the brush, and the hands immersed in turpentine afterwards. In this purification the hair and beard should receive due attention. This statement may be challenged by those who make abdominal sections in cases of pus tubes, but I must draw the line between cases of subacute and acute septic peritonitis whether the same be puerperal or not. In a recent conversation with Dudley, of Chicago, I find that this conscientious man has been thinking along the same line and arrived at the same conclusions as myself in this regard.

Have we not erred in publishing to the general practitioner what numerous lives we could save by abdominal surgery? Would it not be better to give him the benefit of our experience and some of the details of our aseptic precautions, and thereby enable him to avert the probability of carrying the death warrant of his patients in the hair follicles of his hands, under the finger-nails, and in the gloves? Is it not time that we quit contending that there are two factions in antiseptic surgery—one depending on water, the other on chemicals? Inasmuch as chemicals are useless without water, and water without chemicals, even a soap of known chemical composition, the systematic combination of the two in the proper way of their use upon the hands is what the average physician needs to know. The man who is daily dealing with the peritoneal cavity has a store of knowledge of great utility to the general practitioner. And yet we must forget self, and publish only that which we have proven to be right and safe. We must never allow our love of the exact truth to be overborne by the pleasant anticipation of being referred to as an authority.

I meet my friend in consultation. He had told me to bring all kinds of probes to get entrance into the cervical canal, as he had failed to find an entrance into the uterus, notwithstanding he had used the speculum many times. I found the uterus crowded up behind the pubes by an ovarian cyst as large as a water-bucket, which the doctor had not detected; secured the consent of the patient, and set the day to remove the cyst. As we were about to leave, the doctor asked if I had not better use the speculum to see if we could not pass a sound. I replied that fingers were made before forks, speculums, or sounds, and that conjoined manipulation gave so much information that sounds were going out of use.

A very large majority of practitioners I meet are capable diagnosticians. A few are sadly deficient in physical diagnosis of abdominal disease. It is often a lack of persistence in abdominal palpation and determination to master the subject. They have not the art of moving the fingers over the viscera, carrying the skin with the fingers. And sometimes they do not even obtain a knowledge as to whether the tumor grew from above downward or from below upwards. If from above downwards, can it be manipulated back, as in floating kidney, or moved from side to side, not upward, as in distended gall-bladder. They don't understand that palpation of an ovarian cyst should give signs of fluctuation, and a fibroid of a solid; that in both there would be dullness on percussion, whereas in ascites there would be resonance. I mention these points because there is some danger of inspection, palpation, auscultation, and percussion becoming a lost art. There are so many anxious to make exploratory abdominal section.

I hope to be excused for reference to myself. When I spent the winter of '70–'71 in New York City, my friend Prof. Parvin gave me letters to Thomas and Emmett, as I had led him to believe that I intended to become a student of gynæcology. I gained what I could from the instructions of these eminent men, but my private course on physical diagnosis under Austin Flint has been of more use to me than all else I obtained in New York. They had no polyclinics or post-graduate schools in this country then. They have now. It would seem that our

post-graduate schools have much needful work in instructing practitioners, not how many ovaries they can remove per minute, but in the value of bimanual palpation in the diagnosis of abdominal and pelvic diseases.

One of the ablest practitioners of my State calls me in consultation. His telegram suggests that I come prepared to make an abdominal section. The case is a boy, and he has been suffering three days from inflammation with excruciating pain in the region of the vermiform appendix. The doctor has made post-mortem examination, finding a gangrenous vermiform appendix, and from his knowledge gained by this post-mortem and by his reading the current literature of the day, especially the teaching of Morris of New York—that all cases of appendicitis should be operated upon—believed that success would follow and life be saved if we only operated early enough. I, having seen a few operations followed by death because the inflammation was yet in an acute stage—that is to say, while the circumscribed septic peritonitis, which sometimes accompanies cæcitis and appendicitis, was acute not subacute—believed that an operation would surely be followed by death, and that if by opiates we could arrest the progress of inflammation and seize the opportunity in the interval of the attacks, operative interference might do some good. Knowing also that some of these cases make fairly good recoveries without operation, I declined to operate. Neither the doctor nor myself was satisfied with the result in this case, and this subject is of such vital interest to the general practitioner that I quote from a recent article by Dr. Schaefer as being in point: "It has been claimed by McBurney, of New York, that 98 per cent. of all cases called perityphilitis are really cases of appendicitis, and this statement seems to have been almost universally accepted by the profession of our country, for the term perityphilitis has been almost entirely dropped from the text-books and the writings of most surgeons, and appendicitis adopted as a substitute. This change of terms has been accepted with too great haste, in our judgment, and is in all probability one of the chief causes which lead to the great differences of opinion relative to the question of operating; for we shall find upon searching the literature of this subject that various conditions may be, and in all probability are, described under the term 'appendicitis.' I am led to believe through my experience that a larger percentage of cases of so-called appendicitis than we are aware of are inaccurately diagnosed. This, of course, will be difficult to prove; but when we look at the facts produced by practical experience, enough presumptive evidence can be brought forward to indicate that the assertion is not without foundation. How do we arrive at the facts concerning the statistics of appendicitis? 1. By noting operations. 2. By recording results of autopsies. But is it not reasonable to suppose that the greatest source for statistics for lesser diseases of the caput coli is lost in the fact that they recover (it is claimed by Treves that 90 per cent. of all cases get well spontaneously), so that no autopsies are made? I feel convinced that a simple catarrhal cæcitis with an accumulation of fæcal matter is mistaken for appendicitis much more frequently than is generally conjectured, having had at least five cases of this kind recently myself which recovered. In each, after the acute symptoms were subdued, repeated colonic flushing brought away large quantities of dry lumpy fæcal matter, and the tumor vanished. In considering this subject we are at once confronted by two problems: 1. Diagnosis. 2. The question of operation. In perusing the literature on 'perityphilitis' and 'appendicitis,' which during the past few years has become extraordinarily voluminous, one is struck with the fact that most writers and operators take a radical stand for or against operative procedure, and those who favor operating are again divided upon the issue of 'early or late' operations. It seems strange to the casual reader that minds experienced in the same line of work should differ to so great an extent in considering questions of so practical a nature. There is an old maxim, 'Whenever pus is discovered, let it out if possible.' That the indications for the evacuation of pus in this instance are of greater import than in many other conditions or locations, no one will dispute. What, then, causes the hesitation? 1. The difficulty lies

in finding the pus. 2. The great danger to the peritoneum, and its sequelæ. The first difficulty the surgeon will always be confronted with in a proportion of the cases. The second difficulty will be more and more ignored as we become more familiar with the work and more perfect in antiseptic surgery."

Here is common ground where a wise general practitioner with large experience and much reading meets the specialist, both determined to do the very best thing for the patient, and yet they cannot see alike.

A man's business is likely to control his thinking and induce him to look at every subject from the standpoint of his life's work. The farmer deals with many-sided questions in a general way. He may have a good crop or the seasons may be unfavorable. If his crop is good he cannot fix the price. The price is fixed for him in Chicago or New York. He thinks in a general way, not a special way; trusts to the seasons and becomes accustomed to many disappointments.—The shoemaker looks at the passing jumbo elephant in no other light than to think that if his loose hide were lasted it would cover two elephants.

It is the same between the general practitioner and the specialist: the one looks at the thing in a general way, and the other in a special way. They are both instructed by association together over a given case; the ideas of the specialist are widened; the ideas of the general practitioner are narrowed to a closer study as to the particular stage of the disease suitable for operative interference; and ultimately we shall, as I believe, unite in a mutual faith that when to operate is a vital question requiring much skill and surgical wisdom to answer, and even then we will sometimes find that our best judgment and conscientious actions have failed to save a life. I believe that the specialist should concede much to the experience and judgment of the general practitioner. What success I have had is in a measure due to association with intelligent successful general practitioners. I believe the specialist should be as a handmaid to the family physician, by no means supplanting her mistress nor yet usurping her rights, but rather assisting her to maintain them.

Indianapolis, Ind.

HYDROGEN PEROXIDE AND ETHYL IODIDE IN ASTHMA.

BY CHARLES EVERETT WARREN, M.D.

The use of peroxide of hydrogen in asthma may be new to many. I used it three years ago, and since then have found it very efficacious. A condensed-air apparatus is necessary to use it effectively. A straight-tube atomizer, or, still better, a nebulizer, is also needed. Several ounces of the fluid being put into the atomizer, the spray is directed over the patient, the operator standing at such a distance that the cloud of spray shall be spread as widely as possible. I use this in the period of dyspnœa where the difficulty of breathing does not amount to an actual paroxysm. The relief afforded by this means is due, I think, to a super-oxygenation of the inspired air, as a result of which the smaller amount of air inhaled, being largely reinforced by oxygen, is of the same functional value to the system as a larger amount of ordinary air. The blood is thus put into normal condition, and the dyspnœa is cut short, as the blood exerts its normal action on the respiratory and circulatory centres, counteracting the deleterious effect of the under-oxygenated blood due to unrelieved dyspnœa. I think the saturation of the air with moisture also has a beneficial effect. After thus saturating the air of the room with peroxide of hydrogen, in vapor, the dyspnœa rapidly subdues, as a rule, to be followed by calm and refreshing normal breathing. I direct that the vapor shall be used after the patient is in bed for the night, the effort of undressing often starting an attack; in most cases the patient passes a restful night—a state of relief to the patient and attendant which is by far the opposite of the sleeplessness and agony often experienced. A steam atomizer would be as good as the condensed-air apparatus, and would not need an attendant after being set in operation. A little oil of *Pinus pumilionis* may be added with advantage, or any of the oils of pine or fir. The piney-woods odor is refreshing if not directly beneficial.

In the paroxysms I use the iodide of ethyl by inhalation. A few drops on a handkerchief, held to the nose of the patient, will in most cases act like magic after a few inhalations. In one case a physician was so re-

lieved that, fearing the supply left him might give out before morning, he sent a messenger at night, all over the city, to get a fresh supply, in which he succeeded only after visiting many drug stores.

I mention this case to call attention to the favor and esteem in which the remedy is held by the sufferer who has once experienced relief from it, and to the fact that, though not a rare drug, nor very expensive considering the amount required at a dose, yet it is difficult to get at short notice and at every drug store.

I have obtained it in two forms. Merck puts it up in amber-colored tubes hermetically sealed and containing one ounce. Sqnibb puts it up in clear glass bottles surrounded by blue paper, also containing one ounce. He prints the following caution on each bottle: "In order to remain nearly colorless, ethyl iodide must be absolutely excluded from light. As put up here, it is partially protected from change by a very small quantity of a very dilute solution of soda which floats on top of the ether. When by keeping it becomes darker than a deep brandy color, it is unfit for inhalation until washed with a fresh portion of soda. It then again becomes nearly colorless."

Like amyl nitrite, it is quite volatile, and much is lost by using it in bulk even from so small a container as an ounce bottle. In my own practice I use a small bulb with a long neck, similar to those used for Koch's lymph, each holding 10 minims. These are hermetically sealed, and a notch in the tail provides for the safe opening when required. I prefer this form of pearl to the ordinary pattern because it is stronger, so that there is less loss in the case from expansion and bursting by heat, and there is less danger of injury from glass splinters. Those that I use, made for me by Theo. Metcalf & Co., of Boston, are of clear glass. They would be almost perfect if made of amber or violet glass.

The two remedies are also useful in dyspnœa arising from any cause—the rationale being to relieve the effects of suffocation arising from a deficient supply of air, and to relieve the spasm. I prefer the spraying of the peroxide of hydrogen through the room to inhalation from any form of inhaler, as its effect, while not so marked perhaps at first, is of longer duration, besides being an easier method to the patient and less fatiguing. I have never tried the method of using condensed oxygen set free in the room, but see no reason why it might not answer the same purpose as the peroxide of hydrogen, especially if used to atomize some fluid, medicated or otherwise, so as to dampen the air.

Boston, Mass.

THE ANTISEPTIC TREATMENT OF THE DISEASES OF THE EYES, NASAL CAVITIES, THROAT, AND EARS.

BY DR. E. L. TROUESSART.

Aside from the operations practiced on the eyes, and which can only be performed by trained specialists, there are certain superficial affections of these organs (conjunctivitis, blepharitis, etc.) which belong to every-day practice, and which every physician ought to know how to treat conformably to the rules of modern therapeutics. Most of these affections being of infectious and microbian origin, the antiseptics are here unmistakably indicated. Before stating the special treatment of these affections, I shall say a few words concerning certain antiseptics considered in a general manner from the point of view of ophthalmology.

General Considerations.—The 4-per-cent. solution of *boric acid* is most widely in use, but it is not the most efficacious of the antiseptics. Its absolute innocuousness is the only advantage which it possesses. But if from a wholly hygienic point of view it has some utility, we may say without hesitation that when the physician has to do with a conjunctivitis of any sort (conjunctivitis of new-born infants, purulent or even catarrhal conjunctivitis of moderate intensity) its antiseptic action is absolutely inappreciable and altogether insufficient, and that its employment really constitutes a danger, in giving to the patient a false sense of security, and causing him to lose precious time, while the affection spreads and passes to a chronic stage. It would be better far to consult a good specialist who would prescribe from the first an antiseptic treatment proportioned to the gravity of the affection.

These reservations being made, the saturated solution of boric acid (4-per-cent.), pre-

pared with filtered and boiled water, may be employed preferably in hyperæmic conjunctivitis, in catarrhal conjunctivitis of feeble intensity (while watching with care the secretion), and in phlyctenular conjunctivitis (concurrently with the appropriate medication, *i. e.*, ointment of yellow oxide of mercury, 3 grains to the ounce). In all cases the practitioner will make use of a cold solution with which to wet his compresses, which must be applied to the half-opened eyes five or six times a day. Compresses soaked in the same solution *warm* should be employed in all forms of keratitis, unless in cases of infectious ulcerations and blepharitis.

Lastly, this solution may serve for eye-dressings after the section of the cornea in iridectomy, whenever there is reason to dread the dangers of corrosive sublimate solution (such as infiltration of the cornea—a rare accident which has been referred, but perhaps not with sufficient reason, to the use of mercurial collyria).

Surgical instruments, previously rendered aseptic by soaking in alcohol or strong carbolic acid (substances which might irritate the eye in the course of an operation), may be kept in the boric solution prior to and during a surgical operation on the eye.

The solutions of *corrosive sublimate* used in ocular therapeutics ought always to be prepared with distilled water alone, without the addition of alcohol (a condition indispensable in order that this solution may be non-irritant, and in order to avoid infiltrations of the cornea). The solution most commonly employed is 1:2000. Opthalmologists use it for wetting compresses to be applied in the same manner as the boric solution, in the ophthalmia of new-born infants, in purulent conjunctivitis, in intense catarrhal conjunctivitis with muco-purulent secretion, in infectious ulcers of the cornea, in granular conjunctivitis, etc. You will watch the employment of this solution, and if any ill effects should appear on the part of the skin or cornea, you will dilute it with a third or half as much water; you will thus obtain a solution which, while being absolutely harmless, loses (it must be owned) the largest part of its antiseptic properties. The solution of corrosive sublimate is also employed in lavages and irrigations to remove the pus of the inflamed conjunctiva, and to render aseptic the field of operation in iridectomy, etc. Surgeons now use this same solution to moisten the little gauze balls which are employed instead of sponges during operations.

The solution of corrosive sublimate, on account of tarnishing the metals, cannot be used to disinfect instruments used in operations.

A solution of 1 to 500 is employed during curettage of the conjunctival granulations in trachoma.

Bear in mind that when you have recourse to anæsthesia of the eye by cocaine, you must drop in the anæsthetic before medicating the eye with the sublimate solution, for without this precaution the action of the cocaine will be considerably lessened.

Phenic acid (1:125) is also employed as a feeble antiseptic in place of boric acid. Surgical instruments prior to an eye operation may be kept in a stong solution (25 to 50 per 1000), as in general surgery.

Biniodide of mercury, prepared according to the following formula:

> Biniodide of mercury, 0.05 gramme;
> Alcohol, 20 grammes;
> Water, 1000 grammes;

is an antiseptic in general use, and one of the best for lavages, irrigations, disinfection of instruments, etc.

Cyanide of mercury in a $\frac{1}{1000}$ alcoholic solution may serve for the disinfection of instruments; but as the eye tolerates alcohol very badly, the instruments must subsequently be soaked in a boric acid solution.

Iodoform and *aristol* in powder or ointment (1:10) are employed in the treatment of ulcers of the cornea.

It remains to speak of *nitrate of silver*, which, although it is considered by most ophthalmologists rather as a caustic than as an antiseptic, none the less occupies the first rank in the therapeutics of eye affections. Moreover, it is a fact that, because of their action on the microbes, the caustics ought to be classed among the most energetic antiseptics.

In dealing with conjunctivitis in general, the antiseptic treatment such as has been above indicated is in reality insufficient, or can be considered only as preventive. It is necessary to add cauterizations, sometimes

twice a day, with a solution of nitrate of silver (2:100). In the less grave cases these cauterizations may be resorted to at longer intervals—every two days—or they may be made oftener with weaker solutions, as 1-per-cent. or ½-per-cent.

To prevent the purulent conjunctivitis of the new-born, obstetricians counsel a sort of maternal prophylaxis (antiseptic vaginal injections before and during the accouchement); and some would extend this prophylaxis to the infant by bathing its eyes, as soon as born, with some antiseptic solution. Lemon-juice in instillations has been used for this purpose, as well as insufflations of iodoform powder. The latter is always well tolerated, and does not produce any inflammatory reaction.

Special Therapeutics of the Inflammations of the Eye.—To complete the notions which have been stated, we shall indicate briefly the principal treatment in use in the hospitals in Paris to combat the inflammations of infectious nature which have their seat in the membranes of the eye.

CONJUNCTIVITIS.

Catarrhal conjunctivitis should be treated, as we have said, by instillations of nitrate of silver, and compresses wet in boric water.

Granular conjunctivitis has been most successfully treated by repeated touchings with crayons of subacetate of lead, sulphate of copper, or even mitigated nitrate of silver (the excess of silver salt is neutralized by bathing the eye with a little salt and water). To this you may add antiseptic douches (boric or carbolic water), or you may perform massage of the lids after the introduction of a little red-precipitate ointment. Insufflations of finely powdered iodoform may also be used.

Purulent conjunctivitis is treated by M. Budin with lotions of *alpha* naphthol (3 grains to one quart of distilled water), concurrently with cauterizations with nitrate of silver.

M. Kirmisson, after having rid the conjunctiva of pus by an antiseptic lavage, makes a cauterization with a solution of nitrate of silver ($\frac{1}{10}$ or $\frac{1}{30}$), or with the crayon mitigated one-third by the addition of starch. The excess of the nitrate is neutralized with a solution of common salt. The cauterizations are made once or twice in the twenty-four hours. To this are added douches with an antiseptic solution, and in the interval the lids are covered with compresses wet with the same solution, and these are sometimes covered with a little bag of ice.

BLEPHARITIS.

Dr. Trousseau treats this affection by applying every hour compresses wet in the following solution:

℞ Zinc. sulph., 1 part.
Aquæ destil., 100 parts.
M.

Lavages with warm boric water are necessary to detach the concretions which form during the night at the base of the cilia.

An ointment of oxide of zinc and vaselin, 1 part to 10, may also do good service.

In the chronic forms we employ ointments of binoxide of mercury and acetate of lead, with a little oil of cade, tincture of benzoin, etc.

In the blepharitis accompanying pityriasis, the writer uses compresses wet in a solution of sulphate zinc (1:100), applied morning and evening for ten minutes. During the night the border of the lids is smeared with a mixture of vaselin and lanolin, or with an ointment of red precipitate or the yellow oxide of mercury, resorcin, or phenic acid.

In ulcerous blepharitis, he employs phenic acid or corrosive sublimate in weak solution, on warm compresses applied for one-half hour twice a day. To this are added cauterizations with nitrate of silver (crayon or solution), or tincture of iodine if the ulcers are torpid.

In the blepharo-conjunctivitis of infants, Saint Germain and Valude make lotions with the following solutions:

℞ Sulphate zinc, 1 part.
Rose-water, 50 parts.
Distilled water, 150 parts.
M.

KERATITIS.

Trousseau treats phlyctenular keratitis by the introduction, by means of a camel-hair pencil, of a certain quantity (size of a grain of wheat) of the following ointment:

℞ Yellow oxide of mercury, 0.25 gramme.
Vaselin, 5 grammes.
M.

Besides, compresses soaked in boric solution are applied three times a day for a quarter of an hour. The compresses may also be wet in chloral water.

Frictions over the orbit with mercurial-belladonna ointment, and cod-liver oil internally, complete the treatment. The patient is kept in a dark room, and complications are treated according to indications.

IRITIS.

Concurrently with instillations of atropine, warm compresses wet in the boric solution are applied three or four times a day. During the night the compresses are replaced by a wad of absorbent cotton.

Be sure to avoid exposure to cold, which exasperates the iritis.

Inunctions of mercurial-belladonna ointment will calm the pain; iodide of potassium will combat the exudations, and bromide or chloral the insomnia. In the suppurative form, give sulphate of quinine internally.

Treat the cause—syphilis, gout, rheumatism, etc.—with the appropriate medication.

DISEASES OF THE THROAT, NOSE, AND EAR.

The antiseptic treatment of diseases of the nasal fossæ, pharynx, and ears, has made considerable progress during the last twenty years. Here, as in all other branches of the healing art in these days, the methods of exploration and of treatment are thoroughly subjected to the rules of antisepsis and asepsis.

Baths or irrigations, sprays or injections (nasal douche), serve to bring the different antiseptic liquids into contact with the nasal mucosa, and to wash away the pus, the microbes and all the products of inflammation which may sojourn in folds of the anterior or posterior nasal fossæ. The procedures and apparatus devised for this end are described in all special treatises. Sprays constitute an excellent means for bringing the liquid in a finely divided form into contact with the mucosa, and are particularly useful in the treatment of children, who tolerate badly the nasal douche. These are made by appropriate end-tips and cannulæ, whether by the nose or by the mouth, according to the indications. Camel-hair pencils, and sponge probangs with flexible stems, may be soaked in the same liquids and carried to the parts it is desired to medicate. Lastly, the fine impalpable powders are frequently employed, and may be projected upon the part by means of suitable powder-blowers. The caustics may be used in the form of crayons or solutions.

The liquids employed for the baths and douches should be tepid.

The solutions employed for simple detergent washings are the common salt solution (1:100) or weak solutions of bicarb. of soda, chlorate of potassium, etc. The water should be rendered aseptic by previous prolonged boiling. The douches should be thrown gently, and not harshly and with violence, for fear of penetrating the Eustachian tube or larynx and even contributing to the spread of the inflammation. The lavages are only useful in removing the products of abnormal secretion, which contaminate the mucosa. They should be made with considerable slowness, so that the liquid may easily penetrate all the folds and sinuosities; the pressure should be just sufficient to overcome the resistance due to the friction of the liquid against the walls of the nasal fossæ; an almost horizontal direction should be given to the jet.

The antiseptic or disinfectant solutions which are ordinarily employed are: phenic acid (1 to 5 per 1000), permanganate of potash (1 per 10,000), boric acid (1 to 3 per 100).

The powders used are boric acid, iodoform, aceto-tartrate of aluminum, and nitrate of silver. The latter should be mixed with starch in variable proportion (½ to 10 per 100). Tannin and many other antiseptics may be employed under this form.

The caustics are applied to the diseased points by means of a silver probe. Such are chloride of zinc, chromic acid, and nitrate of silver. The galvano-caustic is also employed.

The air-douche, practiced by means of a Politzer air-bag, is chiefly employed in affections of the naso-pharynx, Eustachian tube, and middle ear.

In the chronic affections of the naso-pharynx, and in ozæna, we often have recourse to painting with iodized glycerin the formula of which is as follows:

℞ Iodine, 2.5 to 5.
Iodide of potass., 30.
Glycerin, 250.
M.

Lastly, among the antiseptics employed less frequently we may mention chloroform, employed to kill the parasites of the nasal fossæ, lime-water (in nasal diphtheria), ichthyol (in acute coryza), iodide of potassium (in nasal syphilis), menthol (as an anæsthetic of the mucosa), papayotine (in local diphtheria), resorcin (in ozæna), and thymol (in solution for irrigation), etc.

DISEASES OF THE EAR.

The cleansing of the external auditory passage ought always to precede every intervention, medical or surgical, and even every exploration for diagnosis. For this purpose, warm boiled water and a rubber hand-ball syringe are necessary. Solutions of boric or salicylic acid may be required; and if there exists a fetid otorrhœa, phenic acid or corrosive sublimate will fulfill the indication. A solution of sulphate of soda (5:100) opposes the coagulation of the secretions. Injections should always be made under feeble pressure to avoid the vertiginous attacks consecutive to compression of the tympanum. A probe with a little absorbent cotton wrapped around the end completes the cleansing and serves to dry the auditory canal. If there are concretions adherent to the walls, a solution of bicarbonate of soda (1 to 2 per cent.) facilitates their softening.

The air-douche practiced by the aid of the Politzer air-bag is both a device of diagnosis and a means of treatment. By mediate auscultation it enables us to determine the degree of permeability of the tube, and to know if the air penetrates the middle ear. Besides, this douche clears away the liquid effused into the tympanum, which may flow out by the tube or by the opening of the tympanum, provided the membrane be perforated. From a more general point of view it has a real antiseptic rôle, by drying the secretions and favoring the regression of the local hyperæmias. It may also serve to convey into the middle ear certain medicinal vapors (vapor of water and of hydrochlorate of ammonia—little employed to-day).

To insufflate into the tympanum the vapors of iodide of ethyl, of menthol, of chloroform, of ether, of turpentine, the aural surgeons make use to-day of a special apparatus call the *insufflation capsule*.

Medicinal liquids may be carried up to the tympanum by the aid of the Eustachian catheter to which is adapted a Pravaz syringe or a small rubber hand-ball. By a full insufflation the liquid is injected into the middle ear. In cases of perforation of the tympanum, we inject by the tube a liquid which washes away the secretions accumulated in the cavity, and which flow out by way of the external auditory meatus.

The insufflation of powders is employed in treatment of suppurations of the middle ear. Boric acid and alum finely pulverized, calomel, salol, etc., have been successively used.

Solutions of corrosive sublimate (1:10,000) and of nitrate of silver serve also in the treatment of suppuration of the middle ear. Recently, camphorated salol has been proposed by M. Pegon under the form of a pasty liquid with this composition:

℞ Salol, 2 parts.
Camphor, 3 parts.
M.

A little absorbent cotton is soaked in this mixture, and passed by means of a probe to the bottom of the ear (as near as possible to the diseased point), and the application may be renewed two or three times a day. Each application is preceded by a boric acid injection.

Tetra-borate of soda was introduced into therapeutics by Jaënicke; it is a well defined product, more antiseptic than boric acid, and quite soluble in cold and very soluble in warm water. Both acute and chronic otorrhœa have been treated with success by this new antiseptic (Kafemann).

Sulphate of zinc, perchloride of iron, sulphate of copper, etc., have been employed in affections of the middle ear. Alum in powder or concurrently with solution of nitrate of silver renders service in the same circumstances, while iodoform does not give good results. This medicament is, on the contrary, employed with advantage, alone or conjointly with the phenic solutions, for the dressing of abscesses of the mastoid process after puncture and evacuation of the pus. These abscesses should be opened and treated conformably to the rules of surgical antisepsis, like any other abscess situated in a bony region communicating with the exterior. A dressing of iodoform gauze may be used with advantage in such cases.

Paris, France.

Correspondence.

REPORT OF THE COMMITTEE ON PERMANENT ORGANIZATION OF THE PAN-AMERICAN MEDICAL CONGRESS.

The following report was submitted to the recent session of the American Medical Association at Milwaukee, Wis., on June 6, 1893:

To the American Medical Association: Your committee appointed at Washington to effect a permanent organization of an inter-continental American medical congress, begs leave to submit its final report as follows:

An organization has been effected under the style and title of the Pan-American Medical Congress, to be held at the city of Washington, D. C., Sept. 5, 6, 7, and 8, A. D. 1893, under the presidency of Prof. Wm. Pepper, M.D., LL.D., of Philadelphia. The details of the organization are set forth in the published preliminary announcement of the Congress, copies of which are respectfully submitted herewith, in both English and Spanish, as a part of this report.

Since the publication of this preliminary announcement an organization has been effected in Paraguay. Your committee is therefore pleased to state that an organization of the Pan-American Medical Congress exists in every State and Territory of the United States, and in every remaining country and colony of the Americas, including the West Indies and Hawaii.

A provision has been adopted since the foregoing publication whereby every medical society, national, colonial, and local, has been made a constituent organization of the Congress.

The committee begs leave to report further that the organization which has been effected as above has been and is, by the authority you have conferred upon it, very actively engaged in carrying out the practical ends of the Congress.

The Senate and House of Representatives at the first session of the last Congress adopted a joint resolution, authorizing the President to extend an invitation to the Governments of the Western Hemisphere to send official delegates to the meeting, and to appoint similar delegates on behalf of our own Government. This official invitation has been issued through the Department of State, and all replies so far received have been in the nature of acceptances. The President has indicated that the Government of the United States will be represented at the Congress by six delegates. At the last meeting of the executive committee of the Congress a resolution was adopted directing that in view of the Columbian exercises in progress in America this year, and in view of the relations which have become intimate between the United States and Spain, that the Government of the latter country be requested to send delegates to the Congress. It was thought that the exceptional relations of amity existing between the two countries would warrant a course which has been avoided with regard to all other European countries out of deference to the interests of the International Congress which is to meet in Rome.

The National Congress at its last session appropriated fifteen thousand dollars ($15,000) for the purposes of entertainment of the meeting.

The President of the United States has consented to open the Congress in person and to extend the courtesy of a reception at the White House to delegates and their families.

A special feature of the Congress will be the proceedings of the sections on Hygiene, Climatology and Demography, and on Marine and Hygiene and Quarantine. The proceedings of these sections will be largely of the nature of a sanitary conference with particular reference to practical questions of public health and of imminent importance.

With this object in view, every municipality of the three Americas, including the West Indies and Hawaii, has been invited to send an official delegate, and a very large number of acceptances have already been received.

The titles of several hundred papers, accompanied in many instances with abstracts, have already been received from representative medical writers in the English, Latin, French and Portuguese countries. This, of itself, assures the scientific success of the Congress.

Invitations have been extended to representative European scientists to be the guests of the Congress, and a number of acceptances have been received.

In conclusion, your committee begs leave to express its appreciation of the spontaneous response to its appeal for funds in the form of advance registration fees from the public-spirited representatives of our profession in America. Let it be remembered, no registration fees will be accepted from members of the Congress residing outside the United States. Although money has been realized from advance registrations in amount sufficient to pay some of the preliminary expense of organization, a still larger sum is needed with which to meet accumulated obligations.

It should be held in mind that the Congressional appropriation, meager as it is, will be available only for purposes of entertainment at the time of the meeting, and that the expense involved in publication, correspondence and clerical work is necessarily very heavy and must be met at once. The members of the profession are therefore again urgently requested to register at once by paying the fee ($10) to the treasurer, Dr. A. M. Owen, Evansville, Ind. Those who thus become members of the Congress but who may be prevented from attending the meeting will receive a set of the transactions, which, of themselves, promise to be worth more than the amount of the registration fee.

In submitting this, its final report, your committee begs leave to thank the Association and its executive officers for cordial support, and the medical press for its energetic and efficient aid in promoting this earnest movement for the unification of the medical profession of all the Americas.

Respectfully submitted on behalf of the committee.

CHARLES A. L. REED,
Chairman.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The nineteenth annual meeting of the Mississippi Valley Medical Association will occur in Indianapolis, Wednesday, Thursday, and Friday, Oct. 4, 5 and 6, 1893.

A general session will be held each morning, and the afternoons will be devoted to section work. There will be three sections at this meeting, viz.: one on General Medicine, one on General Surgery, and one on Obstetrics and Gynæcology; the last mentioned having been added since the last meeting.

The indications at present are, that for genuine scientific work this will be one of the best meetings in the history of the Association. The attendance will probably be unusually large, as many physicians expect to make their visit to the World's Fair at this time. Chicago is but a few hours' ride from Indianapolis, and there is no more delightful time of the year in which to visit the World's Fair than this. Holders of tickets to Chicago on any line passing through Indianapolis will be entitled to stop-over privileges at the latter point. Cheap rates will also prevail between these two cities.

The profession of Indianapolis is united in extending a cordial invitation to physicians and their families to attend the meeting.

Reduced railroad rates will be provided, further notice of which will be given.

The Secretary will be glad to receive titles from those physicians desiring to favor the Association with papers. It is especially requested that these titles be sent as early as possible, in order to give ample opportunity for the appointment of leaders in discussion.

The Secretary will take pleasure in giving any information in connection with the meeting.

FREDERICK C. WOODBURN, *Secretary.*
399 College Ave., Indianapolis, June 5, 1893.

A CRITICISM.

To the Editor of the MEDICAL AGE:

Your communication from Dr. Harman, published in the MEDICAL AGE of April 10th, contains statements that should not pass without criticism.

He starts out with a compliment to Claude Bernard for discovering the glycogenic function of the liver, and its connection, by way of its innervation, with the floor of the fourth ventricle. Yet he does not propose to utilize the benefit of that discovery in the treatment of diabetes mellitus. However, a multitude of physiological and chemical discoveries have been made since Bernard blazed the way on that line, and we now know that glycogen is found in many other organs of

the adult body, and that it may be found in almost every portion of the fœtal body. But it is not found in the blood as stated, the Doctor giving the proportion as 1½ to 2½ parts to the 1000 of blood. It is, however, stored up almost in the above proportion in the liver cells.

Landois says, on page 288: "Glycogen or animal starch – 1.2 to 2.6 per cent.—is most closely related to inulin. . . . . It is stored up in the liver cells." Again, on next page: "During life, under normal conditions, the glycogen in the liver is either not transformed into grape sugar (Pavy, Ritter, Eulenburg), or, what is more probable, only a very small amount of it is so changed. *The normal amount of sugar in the blood* is 0.5 to 1 per 1,000, although the blood of the hepatic vein contains a little more." Now please notice that this is the amount of sugar in the blood in a state of health, as determined by four eminent physiologists. Yet Dr. Harman states that this amount is abnormal, and sure to produce cold hands and cold feet. It is Dr. Harman against Pavy, Ritter, Eulenburg, and Landois as to the normal amount of sugar in the blood.

But we will follow the Doctor still further in his communication. He says: "The limited amount of fuel (0.5 to 1 per 1,000 of sugar in the blood) is consumed before it reaches the hands and feet; hence the cold extremities." Here the Doctor is apparently in error. Let the above amount of sugar in the blood be normal or abnormal, it is evenly distributed save that there is a slight excess in the hepatic vein, and the arterial system will carry a due supply to the extremities as well as to the muscles of the heart, for where we have freedom from disease we have free and equalized distribution of the blood, the hands and the feet having their share of it. Will the Doctor deny this? Following up the same line, he continues: "If the glucose is still further reduced, we have the general chilliness requiring extra clothing through the day, and extra covering at night, and inability to resist the fall of temperature."

Now it seems bad enough, in the light of to-day, for any medical practitioner to accept Liebig's old theory that the non-nitrogenous foods furnish the elements of combustion that give heat to the body, but the Doctor does not propose to stand on so broad a basis; he restricts the combustion platform to one plank —that of sugar. If we do not get enough of it we will shiver with cold.

Accepting this position as correct, should not an excess of sugar in the blood flush us with heat?

Will the Doctor attribute the cold stage of ague to total exhaustion of the sugar supply? If so, the liver must be a hustler to get down to the brisk work of furnishing it for the hot stage that immediately follows, especially if no food has been taken for hours. Nervous chills, chills of all kinds, simply indicate that the blood needs a little sugar. So with the epidemic diseases, for they are nearly all ushered in with a chill. Yet some other conditions squarely confront this theory—for instance: Let a man be in the stage of collapse from hæmorrhage, and he will feel as hot as if in a hot oven. This feeling of heat is not from combustion of sugar in the blood, for he has lost his blood. Then a man may die, and immediately a portion of the glycogen of the liver is transformed into sugar. Funny, isn't it? nature makes an attempt to warm up the body with sugar after the man is dead.

Now let us suppose this dead man's whole liver is instantly converted into sugar, and the temperature of the body, taken immediately, registers 110°; does the liver sugar have any connection with the high temperature? No. The blood is dead, and still; there is no vital force to ignite the sugar for combustion. The high temperature is post-mortem, and the physician must look elsewhere than to the blood for its cause. Possibly he would do well to consult the nervous system, not only as to the supply but as to the regulation of the heat of the animal body in life.

With two suggestions, made in all kindness to the Doctor, I will close this communication.

1. Try strychnine for the cold feet and hands, rather than any glucoside.

2. Tell the profession more definitely about your diabetes-prescription, for it is a good one. Do you use it in diabetes mel litus, or in diabetes insipidus, or in both?

C. W. CRAM, M.D.

Columbus, O., April 16, 1893.

Society Meetings.

NATIONAL ASSOCIATION OF RAILWAY SURGEONS.

This organization, represented by thirteen hundred surgeons, two-thirds of the entire membership, held its sixth annual meeting at Omaha, Neb., April 30 to June 3, 1893.

President Brock, in his annual address, recommended the adoption of measures to prevent the spread of cholera in the interior of the country, so that if it should get a foothold on the coast its progress might be checked. From the advance sheets of the report of the Interstate Commerce Commission he showed that the number of men employed on railways in the United States during the year covered by the report was 784,285, being an increase of 34,984 over the previous year. During the year ending June 30, 1891, 2,660 of these employés were killed and 26,140 injured. The number of passengers killed was 293, and 2,972 injured, and those classed as "other persons" bring the total number of killed up to 7,029 and injured 33,881, making a grand total of killed and injured 40,910. The percentage of accidents is on the increase, and efficient surgical corps are necessary. Dr. Brock alluded to the indorsement of the ethical relations of the railway surgeons by the committee of the American Medical Association on the memorial of the West Virginia State Medical Society, but he did not deem it advisable to become the Section on Railway Surgery of the American Medical Association.

Dr. Brock advocated the adoption by the railroad companies of special apartments in railway cars for the transportation of the sick.

The Executive Committee recommended co-operation with the Master Car-Builders' Association in considering the material to be used in hangings, upholstering, and furnishing of coaches, and the use of such fabrics as will be least liable to receive and retain disease-breeding germs, and suggested the appointment of such a committee. This recommendation was adopted by the convention.

The history of the "Injuries of the Cord and its Envelopes without Fracture of the Spine," was the subject of a studied and well prepared essay with illustrations by Dr. George Ross, of Richmond. Discussion of the subject developed novel ideas and was participated in as follows: Discussion opened by Dr. J. H. Murphy, chief surgeon Chicago, St. Paul, Minneapolis & Omaha Railroad, St. Paul, Minn. (1) "Anatomical Landmarks," Dr. Jabez N. Jackson, surgeon Wabash Railroad, Kansas City, Mo. (2) "Physiology of the Spinal Cord," Dr. A. P. Grinnell, chief surgeon Central Vermont Railroad, Burlington, Vt.

Dr. Thomas H. Manley, of New York, read a paper on "Experimental Research of the Injuries of the Cord and its Envelopes, without Fracture of the Spine." This subject of spinal-cord injuries without fracture was later elaborated in other of its bearings, according to programme.

An amendment to the constitution was introduced, to be acted upon next year, barring from membership all but recognized railway surgeons.

Passes were accepted from the Union Pacific Railway Co. for a four-days' pleasure trip to Denver, Colorado Springs, Cheyenne, Deadwood, Georgetown, returning *via* Hot Springs, S. D. The professional gentlemen gave three cheers and a tiger for the railway company when the generous offer was received, and another hurrah for the Pullman Palace Car Co. when it was learned that that company had reduced the rates from $13 to $7 for this special occasion. All but about fifty of the surgeons went on the lark.

The treasurer's report showed $92 on hand, after an expenditure for the past year of about $1,400.

Dr. E. R. Lewis thinks the Association is not a trade union, and read a very interesting paper to show that it is a philanthropic and scientific organization instead. Dr. W. H. Elliott, of Savannah, followed with a paper on the same subject.

Dr. J. B. Murphy, of Chicago, is said to have delivered the most eloquent and logical address of the entire session, in discussion of a paper by Dr. S. C. Benedict, of Atlanta, Ga., on "Pathology and Pathological Anatomy."

In reference to the transportation of dead bodies, the Association adopted the following, after citing the fact that the various

State boards of health have conflicting regulations on the subject:

Resolved, That the National Association of Railway Surgeons recommends that the State boards of health or other authorities having jurisdiction in the matter in all the States and Territories of the United States, shall adopt at as early a date as possible the rules and forms adopted by the Ohio State Board of Health in 1889, governing the transportation of dead bodies upon railway trains.

The rules of Ohio require the prohibition of the transportation of bodies of persons dead of smallpox, Asiatic cholera, leprosy, typhus fever, or yellow fever; while bodies dead of diphtheria, anthrax, scarlet fever, puerperal fever, typhoid, erysipelas, measles, and other contagious diseases, must be saturated with a strong solution of bichloride of mercury, encased in an air-tight zinc-, tin-, copper-, or lead-lined coffin or an air-tight iron casket hermetically sealed, and all inclosed in a strong wooden box.

The convention got into a lively debate on the subject of suits for damages against railway companies.

The railroad companies took a greater interest in the Association this year than ever before, both east and west; and for this, and especially to those companies which furnished free transportation, the thanks of the Association were formally drawn up and mailed. The ladies present also drafted resolutions of thanks for free transportation, which were subsequently adopted by the convention.

The following gentlemen, having been duly named by the Nominating Committee, were elected to official position in the affairs of the Association for one year from date:

President, Dr. W. J. Galbraith.
First Vice-President, Dr. E. R. Lewis.
Second Vice-President, Dr. Thomas H. Manley.
Third Vice-President, Dr. E. F. Yansey.
Fourth Vice-President, Dr. D. F. Stewart.
Fifth Vice-President, Dr. E. A. McGannon.
Sixth Vice-President, Dr. E. G. Cochran.
Seventh Vice-President, Dr. W. R. Blakesley.
Secretary, Dr. J. M. Dinnen.
Assistant Secretary, Dr. J. H. Ford.
Treasurer, Dr. J. Harvey Reed.
Members of the Executive Committee—A. J. Mullen, Jr., to fill unexpired term of Dr. Dinnen; Drs. J. B. Murphy, A. A. Thompson, C. K. Cole.
Chairman of Transportation Committee, Dr. W. B. Outten.
Chairman Committee of Arrangements, Dr. C. H. Wilkinson.

The convention, anent the question of quarantine on railroads, decided that it ought to be done under the supervision of the railroad companies, by the agency of the railroad surgeons, under general law, and at public expense.

The propositions of the Railway Age to donate, first, $150 for the best essay read at the annual meeting of the convention, or, second, to donate $100 to the best, $50 to the second, and honorable mention to the third best essay read, were taken up. The second proposition was accepted almost unanimously.

Business over, the convention settled down to listen to "A Case of Injury to the Bladder and Rectum," by Dr. D. S. Fairchild.

"The Sometime Early Special Treatment of Diseases of the Eye" was the title of Dr. Joseph A. White's essay.

"The Responsibility of the Surgeon in Suits for Damages against Railway Companies" brought out an exhaustive paper by Dr. C. M. Woodward.

Dr. J. B. Murphy, of Chicago, assisted by Dr. J. M. Dinnen of Fort Wayne, Ind., and Dr. Bouffleur of Chicago, gave a practical demonstration on a dog, for intestinal anastamosis, by using the Murphy button. This button is a recent invention of Dr. Murphy's and designed for the purpose of lessening time, insuring results, and making operations on the bowel, that formerly were the bugbear of surgery, as simple, less dangerous, as certain, and even more rapid than the amputation of a finger.

A volunteer paper from D. Joshua Chitwood, of Connersville, Ind., was read upon "Superheated Steam as Applied to Ships and Railroad Coaches as a Germicide."

Dr. Lewis, of Kansas City, began the discussion of the paper, which referred particularly to the prevention of cholera. He said: "Every medical body of men in the United States owes to the hospital service in New York a vote of thanks for the efforts it made to keep cholera within bounds. The only

perfectly reliable method of killing the microbes is by superheated steam." He then moved that the Association extend to the quarantine officers of New York a vote of thanks for the efficient manner in which they maintained the health of the country at a time when the scourge seemed so near.

Before the motion could be put to the convention, Dr. Thomas H. Manley, of New York, arose to pay a fine tribute to Dr. Jenkins, of the port of New York, for his heroic efforts in keeping out the germs. He also stated that he understood it was the intention of the Association to pass a resolution asking that a national board of health be created. He hoped that such a resolution would not prevail, as the States were quite able to take care of themselves. He contended that the State of New York, if left alone, would take care of the spread of the disease.

Dr. Manley's remarks precipitated the warmest kind of a discussion. Dr. Thorne was on his feet in a moment, and said that twenty-five years ago he was fighting against States rights, and he was fighting against the principle still. He contended that this was a nation with a big N, and should look after the health of the country rather than leave it to the States in grave questions of this kind.

Dr. Murphy, of St. Paul, argued in favor of State health boards rather than leaving the question to the Government. He stated that there was too much Government and not enough State in the discussion of the question.

The resolution of thanks to Dr. Jenkins of New York was then adopted.

Then Dr. Thorne moved that it be the sense of the convention that this question of protection against cholera be left to the National Government.

Dr. Manley was on his feet in a minute. He hoped the motion would not prevail; the State of New York, he said, was forever opposed to the paternalism of the older countries, nor would she submit to have her autonomy broken.

Dr. Rogers, of Memphis, in an impassioned speech favored the question being directly referred to the Federal Government, asserting that the port of New York was in the power of Tammany and was one of its most fertile vote-getters.

Dr. Manley branded as highly incorrect some of the statements made by Dr. Rogers, and moved that the matter lie on the table.

But before a second could be heard, Dr. Porter, of Fort Wayne, Ind., mounted the platform and stated that while he believed in the autonomy of the States, he was more strongly in favor of the supremacy of the nation—a terse sentiment which caught the crowd.

Then Dr. Manley renewed his motion to lay on the table; and the convention, by a decided majority, refused to entertain such a proposition, but instead passed Dr. Thorne's motion that the matter should be left to the General Government. There was considerable applause when President Brock declared the resolution carried.

Several minor resolutions were passed, and Dr. Stemen poured oil on the troubled waters by counseling closer application to the work of the physician, leaving the legislators to look after the laws, the managers of railroads after the conduct of the systems, and the surgeons to care for the sick and injured —the result of railroad wrecks. It was a timely speech and seemingly had good effect.

The next meeting will be held at Galveston, Tex.

SPECIAL MEETING OF WAYNE COUNTY MEDICAL SOCIETY—APRIL 3, 1893.

*Discussion of Dr. Graves's Paper on a "Unique Case of Puerperal Sepsis."**

Dr. Richard Murphy: Have used the baths in these cases, and gave quinia sulph. and phosphoric acid.

Dr. E. W. Jenks: The infection is derived heterogeneously or autogenetically. The nidus of infection is so small that it cannot be seen, and small parts of the placenta might have floated into some uterine sinuses. The Doctor's case might have been one of lymphangitis, and the gland of Bartholini the infecting medium. In a patient of mine who shortly after an operation had a temperature of 108° F., which in a few hours fell to normal, I regarded the temperature as of a

*See MEDICAL AGE, May 25, 1893.

ervous character. The reduction of high emperature by the coal-tar preparations is ttended with considerable danger; it is a ne of treatment that I cannot recommend, n account of its depressing effect.

Dr. J. R. Kestell: Would not chloral have elped these spasms?

Dr. J. F. McPherson: The intra-uterine louche has stood me in good stead in these ases, and also in cases of abortion where here was some reason to believe that particles of matter had been retained in the avity of the uterus.

Dr. R. H. Honner: This was not a case of septicæmia, as the hot-water vaginal and uterine douche would have washed out the eptic matter and so brought about quick recovery. The case was one of pyæmia, as it showed afterwards in the metastatic abscesses, and no doubt could be explained in he suppuration of a coagulum.

Dr. W. C. Higgie: I think, with Dr. Honner, that the Doctor's case was one of pyæmia. I had a case of puerperal fever with a emperature of 106° F., which proved to be educible with hot water.

Dr. James Newell: The Doctor's case was one of a heterogeneous kind. I had a case where the temperature ran up to 107° F. (by two thermometers). Saw a parallel case to Dr. Graves's where the temperature rose to 108° F.—a primiparous child; on the eighth day went up to 105° F., and so remained for several days; phlebitis of left leg was seen soon afterwards, which yielded to bandaging with local medication.

Dr. Voorhees, of Coldwater: Would be inclined to look with suspicion on the mastitis, and reduce this with protection to the nipples.

Dr. E. B. Smith: The blunt curette, swab, and douche, in the early stages of these troubles, is the ideal treatment.

Dr. O. S. Armstrong: The existence of germs in the vaginal tract has been amply demonstrated, and that they are innocuous in character, but where the vitality is low they become the opposite. Never saw the temperature over 106° F. in any case. In cases of this class give hydrarg. bichlor. $\frac{1}{60}$ grain every three hours for twenty-four hours.

Dr. S. C. Graves: When we see by the Brand treatment the mortality reduced to one-half of one per cent. in typhoid fever, we must admit this to be a great power for good in these cases. Gave a history of a case where the temperature was vouched for by several medical men as 200° F. As a stimulant treatment to the depressing perspiration of collapse, nothing is better than atropine. In the treatment of cases of high temperature something should be used to interfere with the production of heat, something to act on the heat centres.

E. B. SMITH,
Secretary.

ARKANSAS STATE MEDICAL SOCIETY.

The annual meeting of this Society was held at Batesville, beginning May 31st and continuing for three days. Only about fifty members were present, but what was lacking in numbers was made up in interest, so that those who were absent missed more than they saved.

The officers for the ensuing year are as follows: President, D. C. Ewing, Batesville; First Vice-President, Adam Guthrie, Jr., Quitman; Second Vice-President, W. W. Bailey, Ft. Smith; Third Vice-President, D. I. Jones, Haynes; Fourth Vice-President, E. A. Baxter, Melbourne; Secretary, L. P. Gibson, Little Rock; Treasurer, A. L. Breysacher, Little Roek; Librarian, R. B. Christian.

SANITARY CONVENTION.

The thirty-ninth sanitary convention, under the auspices of the Michigan Board of Health, will be held on Thursday and Friday, July 6 and 7, 1893, at the Bacon Street Baptist Church, Hillsdale, Michigan. The officers of the convention are as follows:

President, G. F. Mosher. Vice-Presidents—L. A. Goodrich, Hillsdale; Rev. Dr. Ransom Dnnn, Hillsdale; Col. E. J. March, Hillsdale; W. H. Bowman, Hillsdale; Dr. D. W. Fenton, Reading; Dr. L. A. Howard, Litchfield; Col. O. A. Janes, Hillsdale; Dr. William R. Ditmars, North Adams; H. C. Blackman, Hillsdale; H. B. Rowlson, Hillsdale; Dr. G. G. Williams, Jonesville; E. B. Gregory, Jonesville; Dr. D. H. Wood, Quincy; Dr. H. D. Wood, Angola, Ind.; Dr. Duncan McKellar, Osseo.

FRANK M. GIER, M.D., Hillsdale, *Sec'y.*

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

FORTY-FOURTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

This meeting, held June 6th to 9th, is now a part of the history of this National Association. The general tenor of accounts indicates an attendance of about nine hundred.

The election of officers resulted as follows: President, James F. Hibbard, Richmond, Ind.; First Vice-President, John C. Wyeth, New York; Second Vice-President, I. N. Love, St. Louis, Mo.; Third Vice-President, Thomas Murrell, Little Rock, Ark.; Fourth Vice-President, U. O. B. Wingate, Milwaukee; Treasurer, R. J. Dunglison, Philadelphia; Secretary, W. B. Atkinson, Philadelphia; Assistant Secretary, L. H. Montgomery, Chicago; Librarian, George W. Webster, Chicago; Editor of Association Journal, Dr. J. B. Hamilton, Chicago. Trustees to fill vacancy of those whose term expired this year—John B. Hamilton and E. F. Ingalls, Chicago, Ill.; L. McMurtry, Louisville, Mo. Members of Judicial Council—J. N. Quinby, Jersey City; J. McFadden Gaston, Atlanta, Ga.; A. F. Jonas, Omaha; H. J. Murphy, St. Paul.

San Francisco was chosen as the place of the next meeting in May, 1894.

The papers and addresses were in the main shorter than usual, and some inspired most active discussion; although it is reported that many in attendance fled to Chicago to attend the Exposition at the earliest moment they could dispatch their work.

All speak highly of the hospitalities extended to the guests and members of the Association, and the entertainment afforded them.

One of the features of the meeting was the address by the scholarly and delightful and brilliant editor of the British Medical Journal, Ernest Hart. The wit and trenchancy of his address at the dinner of the medical editors was highly enjoyed, and was interspersed with much admirable and instructive advice and inspiring appeals for higher ideals of medical education, in view of the achievements of the past and possibilities of the future.

His address on cholera showed that sanitary questions and enactment of sanitary measures had greatly advanced public and professional opinion and government interest in the prevention of disease, and led to reforms which have made the mortality rate of London lower than that of any other large cosmopolitan city of the world, and led to admirable provision for the enlightenment of the masses and eradication of long-existing evils among the indigent and ignorant classes through the great charitable institutions that London had established for their reform, emancipation, and elevation.

Among the many questions before the Association, the ethical reform of the delinquent portion of the profession was discussed, and referred to a committee for consideration at the next meeting.

There were not a few plans and schemes of medical politicians exploded, and on the whole the meeting was a successful one from a social and scientific point of view.

One of the most interesting meetings in connection with this of the American Medical Association was that of the American Academy of Medicine, whose objects are to promote the higher interests of medical education by exacting of matriculants evidences of a standard of general literary and scientific study which would fit them to acceptably pursue the study and successful and honorable practice of medicine.

THE COLD-BATH TREATMENT OF FEVERS.

During the period which followed the introduction of the new antipyretics, of which acetanilid is the type, great results were expected from the systematic use of these remedies. The practitioner had now in his possession certain ideal febrifuge medicines, whose power in the presence of a marked hyperpyrexia was speedily and tri-

mphantly demonstrated. It became a routine practice with very many to resort to these "antithermics" whenever the temperature became markedly febrile.

There soon came a reaction. It was found that patients who were systematically treated during the pyrexial stages of typhoid by liberal doses of acetanilid and analgesin—with the intent to keep the temperature down to a point near the normal—did not do any better than patients who received none. The course of the fever was not at all shortened; often attacks of syncope and cyanosis followed the administration of the medicine, to the great alarm of everybody, and it was especially noticed that the urinary secretion (always deficient in continued fevers) was lessened—sometimes temporarily suppressed—under the influence of the medicine.

Hence from many different sources came vigorous protests against the use of the new antipyretics. Analgesin, acetanilid, phenacetin, and all their congeners were pronounced dangerous, because weakening the heart, because destructive of the blood-corpuscles (Lepine), because lessening the urinary excretion and that of toxic products generally (Juhel-Renoy).

The judgment, after careful trials, pronounced on kairin and thallin, was not more favorable.

On the contrary, the cold-bath treatment, as taught and practiced by Brand, and subsequently adopted by Winternitz, Ziemssen, Glenard, Chantemesse, Juhel-Renoy, Osler, and others, is coming more and more into favor. This method is not open to any of the objections which have been raised against the use of the medicinal antipyretics. It brings down the fever speedily and surely, but it does not produce collapse and cyanosis. On the contrary, the cold bath proves to be a powerful tonic to the heart and nervous system, invigorating the pulsations of the heart, and subduing nervousness, jactitation, and delirium. Instead of lessening the urinary secretion, it markedly increases it. The recent experiments of Roque and Weill have shown that in typhoid fever treated by cold bathing the "urotoxic coefficient" is increased to from six to eight times the amount present under internal antipyretics or other methods of treatment. Juhel-Renoy declares that he has seen the urine increase in quantity, under the influence of the cold bath, to six and seven quarts in the twenty-four hours, and this during the height of the fever.

This refrigerant treatment, by keeping the temperature within safe limits, spares the heart by lessening its excitation by the fever poison, and also by reducing to a minimum the deleterious action of high heart on the cardiac muscle.

It has been said that the cold-bath treatment is only a symptom-treatment. Some recent researches by Thayer show that there may be something more than mere symptom-medication in the Brand method, and that there may be something in the suggestion of Winternitz "that the application of cold calls forth in some way an increased number of leucocytes from the blood-forming organs into the blood current, where they probably exert a destructive influence on any pathogenic organisms which may obtain entry into the circulation."* Certain it is that under the influence of the cold bath there is a very pronounced increase in the number of leucocytes in the circulating blood.

The statistics of the cold-bath treatment have been wonderfully encouraging, and go to show that we have in this method, systematically and judiciously carried out, by far the most successful method yet known of treating a disease whose mortality in the past has ranged from 14 to 25 per cent. Glenard, Winternitz, Vinay, Osler, Tripin, Bouveret, Molliere, Liebermeister, and Juhel-Renoy have all published statistics; we will give only those of the two latter physicians.

Liebermeister's cases are as follows:

	Patients.	Deaths.
Before hydrotherapy.	1,718	469 (27 per cent.)
Mixed treatment.....	982	159 (16.2 per cent.)
Brand treatment pure	1,483	130 (8.8 per cent.)

Juhel-Renoy, as a result of five years' experience with the Brand treatment in the hospitals of Paris, gives: 227 patients, 18 deaths; *i. e.*, a mortality of 7.92 per cent.

Osler has seen the mortality under the Brand treatment fall as low as 5 or 6 per cent. in the Johns Hopkins Hospital.

*Bulletin Johns Hopkins Hospital, April, 1893, p. 37.

RECURRENCE OF CARCINOMA OF THE BREAST.

Doubtless every practitioner who has had any considerable experience in the removal of carcinomatous tumors of the breast has had occasion to be discouraged with the results of the operative treatment, however thorough this may have been. Early and complete extirpation of the growth removes the local disease, but does not remove the susceptibility or predisposition to the disease; and surgeons always speculate as to the length of time a patient on whom they have operated for ablation of a cancerous tumor will enjoy immunity from the disease.

Dr. Frederic S. Dennis, of New York, who has made an exhaustive study of the subject,* affirms that surgical interference can prevent recurrence in 90 per cent. of the cases if, in addition to the complete removal of the breast, the axillary glands and fatty tissue are also removed. He says the liability to recurrence is reduced by an early diagnosis and operation, and that in a large majority of cases the diagnosis can be made before glandular infection has taken place; he adds that if within six months from its incipiency the tumor is removed, together with the axillary glands, fatty tissues, pectoral fascia, perimammary fat, and paramammary areolar tissue, the chances of recurrence will be small. The operation should be so thorough as to leave out of consideration altogether the question of flaps to cover the wound.

Dennis reports a series of seventy-one cases in which he performed the complete operation, with no mortality.

The radical operation removes cancerous cells that form the foci for recurrences. These cancer cells may be found outside the limits of the breast gland, lodged in the adjacent mammary region, whither they have been carried by the lymphatic current. Cancerous masses have been found upon and in and under the pectoral fascia, as well as in the neighboring muscles. Here removal of the breast is inadequate to remove the entire disease.

The recurrence of carcinoma of the breast is influenced by the histological character of the carcinoma itself. According to Dennis the more typical the structure, the better the prognosis—the more atypical the structure the more unfavorable the prognosis.

The appearance simultaneously of carcinoma in both breasts—a condition which exists in about 5 per cent. of all cases—also affects the chances of permanent recovery. There seems further, as Dennis shows, to be less malignancy in carcinoma affecting the breast in the early stages of obsolescence of the gland than when the gland has fully completed its degenerative changes. In other words, the prognosis is more unfavorable for old people than for persons in the full vigor of life. "The nearer the gland is to a healthy functional activity, the less likely is it to assume malignancy."

* New York Medical Record, vol. xli, No. 7.

SANITATION IN RAILWAY CARS.

Not only is it necessary to consider hygiene and sanitation in the construction of cars, but the service must be competent to look after their care, as the public is getting critical in these matters. The trainmen could be easily taught to keep their cars clean, and to successfully manage the ventilating and heating apparatus; but it is quite important that there should be a head or sanitary expert to supervise them. Moreover, "the patron of the road who is enabled to make a journey across the continent without suffering the discomforts arising from the lack of an intelligent care of the heating and ventilating of coaches, and who can arrive at his destination in a good, sound, healthy, vigorous condition, ready for business so soon as the train comes to a full stop, will never forget that line nor fail to draw congratulatory conclusions regarding the management whose intelligent care has been the means of rendering such results possible."

Many of the great railroads have built hospitals, and employ able surgeons to look after them. Others have local surgeons throughout the country to attend to their passengers and employés who are injured by accidents in various ways. In all this, which involves great expense, there has been a gain, direct or indirect, or both, to the railroads.

Book Notices.

DISEASES OF THE RECTUM AND ANUS: THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT. By Charles B. Kelsey, A.M., M.D. Fourth Edition, revised and enlarged. With two chromo-lithographs and one hundred and sixty-two illustrations. Published by Wm. Wood & Co., New York.

This well known standard work has demonstrated its fitness for a long existence by its passage through four editions.

The present edition has been thoroughly revised. It contains new facts, the result of the author's further experience, and also whatever of value has been added to our fund of knowledge by the labors of others in the same field. Dr. Kelsey has long been recognized by medical and surgical readers as an expert authority on rectal diseases, and doubtless this new edition will be welcomed by all those who have become acquainted with his extensive experience and sound judgment in all problems connected with rectal surgery. He has done much to extend the knowledge of this important specialty of surgery. From derangement of the rectal function come many ills of humanity, and it is important for the general profession and students to inform themselves of the progress that has been made in this field of practice. The book will be found a good guide to sound principles of the therapeutics of rectal diseases, and its numerous and well executed illustrations add greatly to its value. The publishers have done their work admirably in presenting this edition in most attractive form.

MODERN GYNÆCOLOGY: A Treatise on Diseases of Women, comprising the Results of the Latest Investigations and Treatment in this Branch of Medical Science. By Charles H. Bushong, M.D., Assistant Gynæcologist to the Demilt Dispensary, New York, formerly Attending Physician to the Northern Dispensary, and Assistant to the Vanderbilt Clinic College of Physicians and Surgeons, New York.

The design of this work is to cover the progressive field of gynæcological science to date; it is largely devoted to the most improved measures and recent mehods of operation and treatment that come within the scope of, and can be of service to, the general practitioner.

The major operations are not given in detail, though the symptoms indicating the services of a specialist are fully described. The book is illustrated by upwards of one hundred engravings.

The titles of its nineteen chapters are: Examinations; Menstruation; Amenorrhœa; Scanty Menstruation; Mennorhagia and Metrorrhagia; Diseases of the Vulva, Urethra, and Urinary Meatus; Diseases of the Vagina; The Cervix; Metritis; Uterine Displacements; Salpingitis and Peri-Salpingitis; Ovaries; Fibroma; Carcinoma; Hæmatocele; Sterility.

Price, $2.75.

HERNIA: Its Radical and Tentative Treatment, in Infants, Children, and Adults. By Thomas H. Manley, A.M., M.D., Visiting Surgeon to Harlem Hospital, Consulting Surgeon to the Fordham Hospital, Member of American Medical Association, New York State Medical Association, New York County Medical Association, New York Academy of Medicine, Pathological Society, National Association of Railway Surgeons, etc., etc.

This work is illustrated by sixty-five engravings and drawings, with a full history of the ancient and modern operations for the hernial infirmity of every type, in both sexes. Along with a full description of the varied anatomical types of the condition, and the multiplicity of technique of modern times, it also embraces an entire chapter on cocaine analgesia as a substitute for pulmonary anæsthesia, with a full and complete set of rules for its indications and technique.

Price, $3.00; mailed to any address. Published by the Medical Press Co., Limited, 1725 Arch street, Philadelphia, to which all orders should be addressed.

RECENT DEVELOPMENTS IN MASSAGE: Historical, Physiological, Medical, and Surgical. By Douglas Graham, M.D., Boston, Mass. Detroit: Geo. S Davis. 1893. Leisure Library Series.

To that class of readers who are convinced by ratiocination, as well as to the wider class who ask only for cumulative evidence, this book will certainly be a means of advancing the claims of massage as a curative agency. It is not proposed, however, to do away with all medication and depend only upon rubbing; nor is it assumed that an amateur or any but a medical practitioner can be trusted

to know how to handle in pathological states this method of treatment, which, like any other, when misapplied may do harm instead of good. The book brings up to date the successful application of massage in a very large number of diseased conditions, such, for example, as prolapse of the sigmoid flexure, impacted gallstones, myxœdema, quotidian fever, lead poisoning, eclampsia nutans, fractures and sprains, ulcers, indigestion, sprue, and other disorders. One does not soon weary of reading a volume such as this, in which the philosophical study is constantly relieved by authentic illustrations, even though a complete system of treatment is not thereby established.

ERRORS IN SCHOOL BOOKS. Second Edition. Boston: Albert A. Pope. 1893.

The class of literature represented by this little pamphlet will constitute a valuable factor in the archives of the coming historian. It is neither more nor less than the record of the Pope Manufacturing Co., makers of bicycles, in the work of public education. This firm has given away over fifty "wheels" to school teachers as prizes for the detection of errors in educational text-books. This means that that number of alterations have been made by the publishers of such books, as the result of the detective work of the school teachers, the errors having been gracefully acknowledged when pointed out. These were not mere typographical or grammatical errors, but misstatements of fact. The Pope Manufacturing Co. is certainly making itself useful in more ways than one, and demonstrating the fitness of the name it has applied to its traveling machine, the Columbia.

CONTENTS OF THE ATLANTIC MONTHLY FOR JUNE, 1893.

New Facts Concerning the Pantheon. Rodolfo Lanciani.

At Four O'Clock in the Morning. Olive Thorne Miller.

The Pygmies of Africa. John Dean Caton.

An Island Plant. Mary Catherine Lee.

On the River at Night. Marion Couthouy Smith.

A National Vice. H. C. Merwin.

Ennui. Agnes Repplier.

Womanhood in the Iliad. William Cranston Lawton.

Two Faces. Emma Huntington Nason.

Some Reminiscences of Dr. Schliemann. J. Irving Manatt.

A Marine Observatory the Prime Need of American Biology. C. O. Whitman.

The Future of Local Libraries. Justin Winsor.

The Hayes Administration. Jacob Dolson Cox.

The Educational Trend of the Northwest. D. L. Kiehle.

Miss Austen and Miss Ferrier: Contrast and Comparison. Charles Townsend Copeland.

Chocorua in Literature.

Comment on New Books.

The Contributors' Club.

THE NATIONAL POPULAR REVIEW.

The June number of this neat magazine contains a number of pungent articles which will afford profitable reading to all who are sufficiently judicial-minded to reserve their decision until the testimony becomes conclusive. Deputy Surgeon-General Sternberg discusses the prevention of cholera—not in the stereotyped style of the chronic alarmist who, knowing only a little bit about the deadly spirillum, pads out his scant knowledge with infinite detail of deduction; but as a practical bacteriologist whose business it is to learn by experiment what agents will best destroy the germs of contagious disease, and then show how the application may be made. While we are not fully prepared to adopt his conclusions, we welcome all the facts he brings to view. Dr. Robert Newman treats of cremation as related to cholera-prevention. Keeley's "gold-cure" gets a double setting-out in the same number. These articles, it might be well to add, are not all original coutributions; they are all readable, nevertheless.

THE ENGINEERING MAGAZINE FOR JUNE.

"What will the Democrats do?" is the first question asked and discussed in this technical journal. Congressman John De Witt Warner, of New York, expects them to fulfill the pledges made in the ante-election platform, and eliminate protection as a principle from

he tariff laws, repeal the Sherman silver act, nake silver and gold interchangeable dollar or dollar, and repeal the 10-per-cent. tax on State bank issues. Other articles are: Great Britain at the World's Fair; The Latest and Greatest Cunarder; Evolution of the Iron-Founder's Art; The Trans-Siberian Railway; English and American Railways; The American Passenger Elevator; Progress in Steam Engineering; Fire Risks in Electric Insulation; Modern American Country Houses. All hese articles are by special qualified writers.

APHEY'S MODERN THERAPEUTICS, MEDICAL AND SURGICAL, INCLUDING THE DISEASES OF WOMEN CHILDREN. A Compendium of Recent Formulæ and Therapeutical Directions from the Practice of Contemporary Physicians, American and Foreign. Ninth Edition, revised and enlarged. Published by P. Blakiston, Son & Co.

Its exceptionally many editions must have roved its excellence and completeness as to ne modern practice of medicine.

In its present form it is handsomely bound nd comprises 1112 pages. It needs no com-nendation to the readers of the AGE who ave had presented to them the vast amount f information that has been gathered in this olume. Its index comprises 21 pages. mong the sentiments it presents on the reatment of Diseases are those of many istinguished contributors to therapeutics.

PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By John V. Shoemaker, A.M., M.D. Second Edition, thoroughly revised. Published in two volumes, comprising 1,400 pages, by F. A. Davis, of Philadelphia.

Its clinical index is very elaborately pre-ared and brought up to date.

Its author's long experience and well known ontributions to medical literature, and its ractical character, must commend it to pro-ressive physicians and students.

RAIN SURGERY. By Allen Starr, M.D., Ph.D. With fifty-nine Illustrations. Published by William Wood & Co., New York.

In view of the progress that has been ade in brain surgery in recent years, it be-oves the modern surgeon and physician to form himself of its limits, its possibilities, and the details of diagnosis and trephining for curable lesions.

It comprises 295 pages, and presents very fully the results of modern experience in brain surgery and the *modus operandi* of operating.

Its author's fame for original investigation in the department of surgery is phenomenal, and readers will find the book a valuable guide in both diagnosis and operative treatment.

THE TREATMENT OF CONSTITUTIONAL SYPHILIS. By Oswald Ziemssen. Published by H. K. Lewis, 136 Gower St., W. C., London, England.

This book comprises the following chapters by this eminent author: Constitutional Syphilis; Local Preventive Method; General Preventive Method; The Expectant Method; The Diaphoretic and Diuretic Method; Treatment by Cold Water and Sea Baths; Mercurial Treatment; The Different Methods of Applying Mercury, comprising the consideration of internal application of mercury per os, per rectum, through the skin by mercurial baths, including vapor baths, by inunction, by hypodermatic method; and Iodide Treatment.

THE NEW ENGLAND MAGAZINE FOR JUNE has poems by Louise Chandler Moulton, Arthur L. Salmon, Edith M. Thomas, and others; articles on early school legislation of Massachusetts, the real inventor of the steamboat, personal recollections of Whittier, Norway's struggles for political liberty, the Boston tea party (illustrated from old prints), trout-fishing in New England; and stories by Helen Campbell, Mary A. P. Stansbury, and John Albee. Altogether, it is a variegated and attractive number. Office, 231 Columbus avenue, Boston, Mass.

MESSRS. P. BLAKISTON, SON & CO. propose sending out at regular intervals a notification card, giving titles, etc., of their new publications. They suggest that those in the trade who deal in medical books keep these notifications for reference until their next new catalogue is sent out. The cards will always answer the question, "What is there new on Medicine?" In our next issue we will publish those now ready.

Notes and News.

An Apology for Tobacco.—

The proscribed cigarette is not without its defenders. Its character has been vindicated by Dr. Walter S. Haines, Professor of Toxicology in Rush Medical College, who, called in to curse, has been obliged by his scientific conscience to bless, or at any rate absolve, the cigarette. He said he had made a chemical analysis of eight or ten different brands of cigarettes, and had discovered no deleterious ingredient and no substance more detrimental to health than is contained in cigars. Positive evidence of a much stronger kind is given by Dr. A. A. Smith, Professor of Practice of Medicine in the Bellevue Hospital Medical College, New York. In a recent clinical lecture, that physician, while admitting the possible evil effects of the abuse of tobacco, said it was not always wise to make a patient with any chronic disease, particularly of the heart, give up smoking. He met with many cases in private practice in which smokers who had heart disease suffered from palpitation, dyspnœa, and præcordial distress on the slightest exertion when they abstained from tobacco, whilst, on the other hand, if they continned to smoke, compensation was well maintained, and no particular ill-effects were caused by the valvular lesion. Among other cases cited by Professor Smith in support of his thesis is that of a young medical man who was told ten years ago that he had grave valvular lesions, and that he had not many years to live. The young man, taking a philosophic view of the situation, thought he had better smoke as much as possible while he had the chance. He has been doing so ever since, and the outlook is now better that it was ten years ago. Dr. Smith also refers to two Russian ladies who are in the habit of smoking cigarettes. Both have organic heart disease, which gives them no trouble unless they forswear tobacco for a time, when symptoms of loss of compensation soon show themselves. Dr. Smith deprecates the inference that the use of tobacco is justifiable in all cases of heart disease, or even in the majority of them. He holds only that it is not contra-indicated in all cases. His facts, however, may fairly be taken as showing that in smokers, at any rate, tobacco is positively indicated in certain conditions, and lovers of the cigarette will be glad to have the support of so powerful a champion.—*London Lancet.*

Detroit School for Boys.—

The first public graduating exercises of the Detroit School for Boys were held June 16th, in the Woodward Avenue Congregational Church.

After a musical selection was given, Rev. H. P. DeForest offered a prayer, which was followed by another selection, when Prof. John C. Freeman, of the University of Wisconsin, delivered an eloquent address to the students.

Prof. Freeman's address was a happy effort and occasioned no small amount of favorable comment among those who were fortunate enough to have heard it.

Professor Freeman made an ardent plea for the natural and advanced method of education carried out by this school.

He showed also clearly how such methods allowed for individual development of students of different types and temperaments and tastes, and contrasted them with the antiquated methods that are still employed in the public schools which make no distinction as to individuality, but endeavor to mold all by the same stereotyped form which has done much to distort the natural bent and characteristics of many a bright youthful mind.

Mr. Frederick Whitten, the manager of this model school, gave the graduating class excellent advice for their guidance in further educational progress.

The following young gentlemen received the honors of graduation: Frederick Alexander Balch, Guy Leartus Connor, Ray Connor, Henry Keep, Richard Graham Kirchner, and Edward Alleyne Sumner, Jr.

This was the first public exhibition given by the school since its inception three years ago, and it deserves unlimited praise for the admirable manner in which the various classes are conducted.

The school is recognized outside of Detroit among educational institutions as one of the best of its kind, its certificates entitling graduates to enter the Universities of Michi

gan and Wisconsin, and Williams College, without examination.

The six graduates of this year will pursue their studies next term in the following institutions of learning: Two in the University of Michigan, one in Yale College, two in the Wisconsin University, and one in the Massachusetts Institute of Technology.

An Impostor on the Wing.—

"Dr. Otto von Mueller," a hifalutin adviser who claims to be a physician, and who has been inviting young and middle-aged men especially to consult him at Benton Harbor, Mich., that they might be scientifically cured of nervous and venereal diseases, heard something drop a few days ago, and so folded his tent like the Arab and silently stole away. He claimed to be a graduate of the University of Cracow, Austria, and an ex-professor of the University of Moscow, Russia—no less. To see if his pretensions might not be punctured by proof of falsehood, the health officer of Benton Harbor wrote to the dean of the University of Cracow, inquiring after the so-called Dr. von Mueller's record. He received the following reply:

CRACOW, 8th May, '93.

Health Officer at Benton Harbor, Mich.

DEAR SIR AND COLLEAGUE.—In answer to your letter from the 10th of April I can inform you that the name of Otto v. Müller does *not appear* upon the roll of graduates of the University of Cracow, and that the person in question is fully unknown to us.

Very truly yours,
LÉON HALBAU,
Dean of Medical Department.

If it were not such an easy matter for the so-called doctor to assume a new cognomen for the purpose of escaping the effects of this exposure, we would say to the profession and the laity of other towns, look out for Dr. von Mueller, of Benton Harbor. As it is, he is only a specimen of a class of mushroom "specialists" who go from city to city trading upon the credulity and the physical debility of their fellow-men. "The University of Cracow" has an imposing sound; its being drummed into the service of Dr. von Mueller indicates that even this class of pretenders feel the need of educational credentials. When the public becomes a little more exacting in this respect, the quacks will find they have a hard road to travel.

Obituary.—

Alphonse Louis Pierre Pyrame De Candolle, professor of botany and director of the Botanic Garden at Geneva, Switzerland, died in that city April 5th last, in the eighty-seventh year of his age. He was the son of the celebrated botanist, Augustin Pyrame De Candolle, and was born in Paris, France, Oct. 28, 1806. The father having, in 1816, accepted a call as professor of botany to Geneva, Alphonse completed his education at the university named, studying jurisprudence, and also botany, the latter science with such success that already in 1830 he published a monograph on the Campanulaceæ, and in 1832 on the Anonaceæ, which works were followed in 1835 by his "Introduction à l' étude de la botanique." In 1834 he succeeded his father in the professorship, and after the latter's death in 1841 continued, with the aid of other botanists, the publication of the large work "Prodromus systematis naturalis regni vegetabilis" (complete in 21 volumes). Among his other famous works may be mentioned "Géographie botanique raisonné" (1855), "Histoire des sciences et des savants depuis deux siècles" (1873), "Origine des plantes cultivées" (1883), and "Monographiæ phanerogamarum prodromi nunc continuatio nunc reviso" (1878 to 1881); the last-named work was issued with the collaboration of his son Casimir Pyrame.

Deaths of Eminent Foreign Medical Men.—

Cantani, the distinguished clinician of Naples, has died. He was well known for his studies of deranged metabolism, notably diabetes, and most recently for the method of treating cholera by means of rectal injections of tannic acid and subcutaneous injections of a saline solution.

The deaths of the following distinguished members of the medical profession abroad have also been announced: Dr. José Severino de Avellar e Lemos, medical officer of the hospital of Nitheroy, Brazil, and brother of two well-known Lisbon surgeons. Surgeon-General Raffel, of Berlin. Dr. Tácito Molino Guirola, vice-dean of the Faculty of Medicine, Guatemala. Dr. Paul Guttmann, of the Moabit Hospital, Berlin, at the age of 55, after a short illness, of which influenza

was the commencement, pleurisy and pneumonia following; he was well known both as a physician and as an author of many medical works, including one on Physical Diagnosis, which was translated by the Sydenham Society. It may be remembered that Professor Guttmann had charge of the cholera station established at Berlin last year during the prevalence of the epidemic.

The Business Aspect of the Practice of Medicine.—

The Detroit Medical and Library Association has adopted what is described as a fee-bill. This is a scale of charges that is "intended to guide rather than govern members. The maximum and minimum figures have reference to the degree of responsibility and time consumed in a given case, rather than to the circumstances of the patient, which may justify a lower or a higher charge. All bills should be considered due when services are rendered. Statements should be rendered monthly." For an ordinary office prescription the fee is fixed at from $1 to $5. Other fees range from $2 to $5,000. The last is the maximum for an operation for the removal of stone from the bladder. Three thousand dollars is the maximum fee for Cæsarean section, ovariotomy, cœliotomy, hysterectomy, abdominal and vaginal hysterorrhaphy, and amputation of the hip-joint. We fail to find any reference to discounts, allowances, or rebates of any kind, and to the consideration of cases that should receive gratuitous treatment. The abuse of the privileges extended by hospitals and dispensaries deseves attention also. We fear that there are inherent difficulties in the adoption of a fixed schedule of charges by physicians for professional services. We must look to the schools to send out only good men.

A Bacillus of Ozæna.—

Abel describes a bacillus which he believes to be pathogenic of ozæna. It is found with many other organisms in the muco-pus beneath the scabs, and is not found in other varieties of nasal secretion. It grows upon the ordinary culture media, with the production of a peculiar odor, like that of fermenting malt. It does not produce spores, but lives long in a dry state. The author was unable to produce ozæna in animal He believes that this specific organism do not directly cause the well known odor, b that this is due to various organisms alway found associated with it, capable of decon posing albuminous substances, and that th organism itself merely excites a peculi secretion in the nasal mucous membran which differs from the ordinary secretion chronic inflammation in being capable putrefaction.—*Boston Medical and Surgic Journal*, May 18, 1893.

A New Professorship in the University of Pen sylvania.—

At the last meeting of the trustees of th University, Dr. Charles K. Mills was electe Professor of Mental Diseases and of Medic Jurisprudence.

The course in mental diseases will be ele tive to the third and fourth year student and that of medical jurisprudence will b compulsory for students of the Auxiliar Department of Medicine, and elective to th fourth year class.

Owners of Patents of Piperazin.—

We are to-day informed that a cable fro the "Chemische Fabrik auf Actien," formerl E. Schering, in Berlin, conveys the informa tion that the German Patent Office, in th piperazin matter, has decided against th Farbenfabriken, formerly E. Bayer & Co Elberfeld. Piperazin was patented in Ge many to Schering in 1890, while the pate or which Bayer recently applied was not a lowed.

New York Post-Graduate Medical School.—

At a meeting of the Board of Directo held May 17, 1893, A. Palmer Dudley, M.D was elected Professor of Diseases of Wome George M. Edebohls, M.D., Professor of th Diseases of Children; and George T. Ellio M.D., Professor of Diseases of the Skin. West Roosevelt, M.D., has resigned his pos tion as Professor of Clinical Medicine.

An Hospitable Town.—

There is an association of physicians an surgeons in Philadelphia organized for th purpose of showing courtesies and attention to visiting physicians.

Therapeutic Brevities.

The Fruits of Vivisection.—Sir Andrew Clark has given The Hospital a brief list of the results of experimental research, which may be perused with profit by the anti-vivisectionists. By experimental research surgeons have been enabled to arrest or cure diseases by excising portions of the stomach, by removing one of the kidneys, by amputating the larynx, and by extirpating portions of the brain and spinal cord. By experimental research Koch discovered, in the presence and action of the tubercular bacillus, the true cause of tuberculous disease; and this discovery has not only thrown a flood of light upon the natural history of consumption, but has enabled us to discover its presence when otherwise unsuspected, and to bring about a successful revolution in the treatment of surgical tuberculosis. Furthermore, there are just reasons for expecting that the continuance of this experimental research will lead to the discovery of means for the prevention, and perhaps even the cure, of pulmonary consumption, which destroys so many of the fairest and best of our race. By experimental research we have discovered the condition for using with efficiency and safety almost all the stronger and most useful drugs, such as digitalis, chloroform, ether, chloral, nitrite of amyl, nitroglycerin, and many others. By experiment upon animals we have discovered the nature and relations of infectious diseases; and we have learned how, in some measure, to prevent the development and to control the spread of fevers, cholera, anthrax, and septicæmia. Through experiments on animals we have received the use of the electric telegraph, and all the various services which electricity now renders to the convenience and uses of man. And yet, with all these services before us, one cannot (in England) scratch the neck of a rabbit for the advancement of knowledge without becoming a legal criminal. But, on the other hand, for your pleasure, or for your profit, or for any other object than the promotion of knowledge, you may, without let or hindrance, beat, starve, mutilate, or destroy as many animals as you please. Knowledge can be advanced now only by experiment, and if experiment is to be suppressed, and if consistently the use of knowledge acquired in this manner is to be rejected, then it is certain that the art of preventing and of curing the diseases of beasts and men will decay; that physical and mental degeneration will follow, and that science in England will become the contempt and pity of the world. And if physiology, pathology, and therapeutics were to continue their course without the help of experiments upon animals, the errors that would be committed in the exercise of our art would bring about greater suffering and greater unhappiness than all the vivisections which have ever been performed. Lastly, if experimental research hardens the hearts of experimenters, it is only too plain that an active antagonism to it begets a disregard of accuracy, a violation of charity, and a spirit of calumny which have no parallel among ordinary men.—*Medical Record*, Jan. 28, 1893.

Cretinism Treated by Hypodermatic Injection of Thyroid Extract and by Feeding with the Raw Gland.—Dr. E. Carmichael (Edinburgh) records the following case (Lancet, 1893, No. 3629): The child, aged five to six years, looked like an infant. Features broad and massive; skin dry and harsh; abdomen prominent; umbilicus protruding; hair sparse, dry, and unhealthy; intelligence very feeble; appetite extremely capricious; obstinate constipation, and subnormal temperature. Rate of growth, one inch per annum. Treatment was begun in April, 1892; injections of 10 minims being given at intervals of from seven to fourteen days. In October, feeding with the raw gland—about one lobe per week administered in cold beef-tea. "After the first few injections, the appearance of the child had completely changed; there was a marked diminution in the size of the abdomen, so that a bodice which fitted before the commencement of this treatment now overlapped by four or five inches. The thick lips and alæ nasi were now of normal size, the skin was pliant and soft, the temperature to touch improved, and the hair apparently more healthy, though still sparse. In October the child began to walk, and soon was running about, and even walking long distances. The head, smaller to appearance, became covered with a fine crop of healthy hair. Marked improvement in intelligence was seen in many little actions.

"During the nine months the child has grown fully four inches; the supraclavicular pads have quite disappeared; the appetite has improved amazingly, her dietary being a much larger one now; the constipation is gone, the umbilicus no longer protrudes, and there is no tendency to eczema. The temperature remains at about 97° F. The improvement is such that a friend and regular visitor at the house, who had been absent for some weeks, on seeing the child, did not recognize her, and, thinking she was a stranger, asked whose child she was. One point I may mention—namely, that prior to

the thyroid treatment there frequently appeared a dark, almost black, part on the scalp, which, after increasing in depth of color, came away in scales. I judged it to be a colored sebaceous secretion."

Diabetes Treatment by Ingestion of Pancreas.—A manifest improvement is reported to have been obtained in a diabetic and emaciated patient, affected with constant polyuria and glycosuria and showing signs of pulmonary tuberculosis, by the daily ingestion of pancreas.

The patient first drank the expressed juice from the pancreas, and then ate the previously slightly-cooked gland. After two weeks of this treatment and while partaking of no other medicine, a manifest improvement was obtained: the appetite had returned; cough and polyuria had decreased; the body-weight had increased, at the end of two months, by 700 grammes, (about 1½ lbs. Av.); the physical symptoms of his pulmonary affection had improved; and albuminuria had disappeared. Although the urine still contained the same proportion of sugar, the absolute quantity excreted in twenty-four hours had diminished in ratio to the very marked diminution of polyuria.—Dr. W. K. Sibley, in *Sem. Méd.*, 1893, No. 21.

Tasi.—Tasi or Tasis (*Morrenia brachystephana*), one of the Asclepiadæ, a native of the Argentine country, has been highly spoken of as a galactagogue. It is used in the form of an infusion of the leaves and root, fresh or dried, and as a decoction of the fruit. Thirty grammes of tasi-root are infused in 200 grammes of water; this amount may be taken in tablespoonful doses during twenty-four hours. A decoction of 40 grammes of the fruit in 20 grammes of water can be taken in the same manner. It has a sickening effect when swallowed, and leaves behind it a bitter taste. Among fifteen women suffering from insufficiency of milk, eleven were much benefited by tasi, in two the effect was doubtful, and in two *nil*. The length of time after delivery had no effect on the rapidity with which the secretion was restored.—*E. Del Arca and J. Sicardi.*

Treatment of Croup.—Dr. N. S. Davis says all the indications for treatment in croup, in the mild or superficial form of the disease, can be fulfilled by the administration of:

℞ Syr. ipecac., ℥ ix.
Syr. scillæ comp., ʒ iss.
Tinct. opii camph., ♏ ij.

M. Sig.: Half teaspoonful every three or four hours.

—*Medical Record*, Jan. 28, 1893.

Medical Progress.

Jambul in Glycosuria.*—As early a 1888, I experimented with the powdered an extract forms of *Syzygium Jambolanum*, rec ommended in English journals as a remed in diabetes, and convinced myself of its eff cacy, so far as reduction of the quantity c sugar secreted is concerned, refraining, how ever, from the further employment of th remedy especially on account of the hig price, and particularly in view of the state ments of English physicians that the smal doses prescribed produced usually only tran sient results.

About 100 grammes of the extract of th bark were subsequently placed at my dis posal. I had occasion to administer it i doses of 50–100 grammes *pro die*, and in tw cases the sugar vanished from the urine; i one severe case the content of sugar was re duced to one-seventh its previous volume The action of the preparation made from th fruit is, indeed, somewhat more energetic tha that from the bark. Troublesome collatera symptoms were not perceived with either preparation.

In the summer of 1891 I employed a large quantity of the bark extract, and was enable further to corroborate my estimate of th high value of the preparation. The two fol lowing cases deserve a more detailed descrip tion:

1. Mr. F——, of A——, 56 years old, a large man, formerly weighing about 300 lbs. presented himself with chronic eczema cover ing the whole abdomen and a large part of the upper thigh, having begun at the geni tals. There was great thirst, surprising de bility, transient pains in the lower thighs, loss of weight, etc. The conjecture that diabetes was the cause of the symptoms was strength ened by the fact that two brothers of the patient had died of this malady. Examina tion of urine showed 7 per cent. sugar.

A rigid antidiabetic diet and 40 grammes *pro die* of extract of the fruit of *Syzygium Jambolanum* were prescribed. After the lapse of only four days the patient showed no more sugar, and in this improved condition he remained until his recent death from influenza, pleuritic exudate, and cardiac debility. The eczema very quickly disappeared without local treatment, as did also the other morbid symptoms. The absence of sugar from the urine was established by monthly examinations continued for two years. The

* Dr. Vix, Obermed.-Rath, of Darmstadt, in Therap. Monatshefte, April, 1893, p. 160. Translated by Joseph Helfman.

liet was rigidly antidiabetic only for a short period following the beginning of treatment. Altogether about 300 grammes of both kinds of jambul extract were consumed.

2. Mr. A——, of K——, of about the same age as the preceding patient, had been suffering for about three years from mild glycosuria, against which he had struggled with fluctuating success and with varying degrees of intensity. For a number of months, as a result of urinary examinations, patient was supposed to be free from sugar in urine, when, at the end of January, 1892, he was seized with influenza which prevailed in his district; it was accompanied with a capillary bronchitis, extending to both lungs, with little pneumonic foci and severe dyspnœa. The patient's debility long gave ground for fearing a fatal termination. On the 2d of February a further complication manifested itself; the urine contained, despite avoidance of carbohydrates and very meagre rations of food, nearly 3 per cent. of sugar, beside slight quantities of albumin. The total secretion of sugar amounted to 108 grammes in the twenty-four hours.

In addition to general tonic medication, 45 grammes fl. ext. syzyg. (from bark) were given. The very next day the sugar-content fell to 0.5 per cent.; ascended again to 2 per cent. on diminishing the dose; and on the tenth day, after prolonged administration of the first-named dose, disappeared finally from the urine together with the albumin. The entire ominous morbid tableau underwent a speedy change for the better. Patient soon recovered his previous capacity for labor, and remained free from sugar during the succeeding months, observing a rigid dietary. At present is engaged in the duties of a commercial traveler, in India. Mr. A—— is, of course, withdrawn from urinary examinations.

It is not to be doubted that the secretion of 108 grammes of sugar *pro die*, observed during the height of the disease, and persisting despite rigid antidiabetic and restricted diet, would soon have consumed the patient's vitality, had not jambul overcome the formation of sugar: it is, therefore, proper to regard the remedy in this case as directly preserving life. I have no doubt that it will assert its efficacy in similar intercurrent acute diseases of diabetics.*

I have employed the extract of the bark in ten other chronic cases of diabetes—some of them very severe—and always found where the patient faithfully respected my restrictions of diet that it was possible to render the urine free from sugar in a few days and to improve materially the general condition.

If it is made clear that the secretion of sugar is no independent disease, but only a symptom of the most varied primary affections, such as pancreatic, cerebral, and nervous disturbances, we shall speedily learn not to expect that jambul alone will be capable of effecting a radical cure of diabetes without the co-operation of other favoring factors.

I may, however, add the following observations: In no case, when employing the syzygium extract, was there any disturbing collateral symptom, even on the prolonged daily use of 50 grammes. I gave repeatedly 15 to 20 grammes daily in 250 to 500 grammes of water or wine, to which saccharin was sometimes added. The dilution has a beautiful dark-red color like Bordeaux wine, and an astringent taste. It is best borne by a full stomach, since sensitive patients sometimes suffer slight nausea when taking it on an empty stomach. In one case the urine assumed transiently a red color after using jambul; several times there was a suspicion of yellowish-red color in whitish milky stools. Finally, the jambul coloring-matter at times developed in a manner tending to disturb the urinary examinations with cupric sulphate and caustic soda or potash.

Extracts stored for a considerable time at too high a temperature became turbid and lost their beautiful brownish-red hue; I cannot say whether the properties were likewise affected. Several times, after the administration of 40 grammes of the extract of the bark, pronounced diuresis of short duration supervened. The specific gravity of the urine was materially reduced—in one case, from 1.031, to 1.002 on the following day, the amount of water imbibed being the same.

Almost all those treated with jambul presented the tableau of chronic glycosuria without polyuria, but often with symptoms of neurasthenia.

Severe cases of so-called classical diabetes were rare, and, under jambul treatment, assumed the more benign form. None have thus far ended fatally.

I have also tried the jambul preparations prepared in and obtained from India, but

* During the printing of this report, an elderly woman living in a neighboring city presented herself to me, cured, in her judgment, by jambul which I had prescribed three months previously on account of a severe glycosuria of several years' standing (5 per cent. of sugar being then found in urine); 45 grammes of jambul extract were taken daily, until the chemist pronounced her urine free from sugar. This condition followed after two weeks' treatment. I found later a trace of sugar, but there was general well-being.

found them inferior to our own. Possibly we may thus account for the published reports of slight success from using the remedy—inferior preparations and insufficient doses.

LIVING AND CHEMICAL FERMENTATION.—Fermentation, as is well known, is classed in two categories: the one depending on living beings (vital fermentation); the other depending exclusively on chemical processes independent of life, and capable of developing in absolutely sterile media (chemical fermentation). The fluoride of sodium, which at 1 per cent. stops instantly and definitely all vital fermentation, and with it all manifestations of life, without suspending chemical fermentation, permits the appreciation of the phenomena of the other group.

The addition of 1-per-cent. solution of fluoride of sodium preserves organic matter from all putrefaction, even at a temperature of 40° to 45° C. All substances thus preserved, such as milk, blood, urine, bile, beaten eggs, fruits, fragments of animal tissue, saliva, pancreatin, gelatin, etc., presented, after several months at 40° C., neither odor or any other alteration characteristic of the development of microbes. The sugar, the disappearance of which from an organic medium is one of the first microbic phenomena in living fermentation, is preserved totally in fluorated liquors. It is not to the precipitation of the calcium salts that the fluoride owes its sterilizing property; for the oxalate of sodium at 1 per cent. has not the same property—it retards only the beginning, and moderates the march of putrefaction.

The lactic ferment is destroyed by the fluoride of sodium at 1 per cent.; it suffices generally to add to the milk 0.4 per cent. of fluoride. The sugar of milk is preserved *in toto* in the fluorated liquors.

The ammoniacal ferments of urine are inactive in the presence of fluoride of 1 per cent. Their resistance to the action of this salt is less than that of the micro-organisms of putrefaction and of the moulds. The quantity of the urea in fluorated urine is invariable.

The fluoride of sodium at a dose of 0.3 per cent. arrests the alcoholic fermentation of sugar instantaneously.

The fluoride of sodium at the stated dose, then, prevents the development of living elements in organic liquors and tissues. Inferior doses are even sometimes sufficient to completely sterilize; but always, even in very small doses, the appearance of fermentation is retarded and the intensity is diminished.

The soluble ferments—invertin, trypsin, emulsin, etc.—preserve their activity in the presence of fluoride of sodium. The products of fermentation are the same whether the fermentation occurs in the presence or the absence of this salt. The natural digestive juices—gastric juice, pancreatic juice, and the digestive juice of maceration—preserve in the presence of the fluoride their normal property. After several months these soluble ferments are not destroyed by the salt of a strength of 1 per cent. at a temperature of 40° C.

The alcoholic fermentation of saccharose presents two phases. One is an inversion of the sugar—a chemical phenomenon; the other is the splitting of the inverted sugar—a vital phenomenon; the fluoride of sodium stops only the second fermentation.

The blood may transform the glycogen into reductive sugar, by means of the diastase that it contains; the fluoride of sodium does not prevent this fermentation.

The liver separated from the organism, and freed from blood by intravascular washing, transforms its glycogen into sugar. This transformation is possible in the presence of 1 per cent. of fluoride of sodium—that is to say, in the very conditions in which the life of the cellular elements is impossible; hepatic glycogenia, therefore, is a phenomenon of chemical fermentation. Furthermore, hepatic macerations kept sterile by the fluoride of sodium preserve the power of transforming the glycogen into sugar, during weeks and months—that is to say, during a time infinitely longer than the possible duration of life of the cellular elements of the liver.

The defibrinated or oxalated blood consumes its oxygen, and produces carbonic acid gas. The fluoride of sodium stops completely and definitely this phenomenon of oxidation; the nature and the gas of the fluorated blood remain invariable. The transformations which occur in the non-fluorated blood are the phenomena of the vital respiration.

The green parts of the vegetables lose, by the action of fluoride of sodium, the property of decomposing carbonic acid gas and liberating oxygen. The chlorophyllian function, then, is a vital phenomenon.

Finally, the fluoride of sodium at 1 per cent. kills every living thing, and opposes the development of vital fermentation without arresting chemical fermentation. It permits the determination of the nature of the phenomena having their seat in an organic medium, and explains whether they belong to a vital action or to a diastasic action.—*Modern Medicine and Bacteriological World.*

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Original Articles.

GONORRHŒA IN WOMEN.

BY F. BYRON ROBINSON, B.S., M.D.*

Gonorrhœa is an infectious, progressive catarrhal disease of mucous membrane. It is undoubtedly caused by the gonococcus of Neisser. Neisser's gonococcus is a double-shaped vegetable organism known as a diplococcus. The gonococcus was seen in gonorrhœal pus by Haller in 1869, but the coloring methods were not then developed, and so Haller's investigations attracted but little attention. Dr. Neisser, who was an assistant in the Skin Clinic of Breslau, made some investigations by coloring gonorrhœal pus in 1879. He then published his discovery of what is known as the vegetable germ—gonococcus.

To see the gonococcus in the gonorrhœal pus, spread out a tiny drop on a cover-glass, then dry it, and stain it for a couple of minutes in a watery solution of methyl blue; dry it again, and mount it in Canada balsam, and it is ready for inspection. Under the microscope one sees diplococci, or double-shaped organisms. The coccus lies mainly on the surface of the pus corpuscle. The organisms group themselves commonly into colonies. From eight to thirty may be seen in the irregularly numbered and formed colonies. I would say that it requires some experience to enable one to properly color and examine with any distinctiveness the gonococcus.

The home of the gonococcus is the cylindrical epithelium of mucous membrane.

It may be here noted that I am extending the field for the gonococcus, when it is said that it produces disease in *mucous membrane.* The author's investigations and publications show that he was one of the first men in this country to demonstrate that the vesiculæ seminales were frequently the seat of gonorrhœal invasion. I next began to write that the strictures of the rectum of women frequently arise from the invasion of the gonococcus. It can therefore be easily observed that the author considers gonorrhœa a very widespread disease. It is vastly more so than syphilis, and also vastly more fatal.

The *frequency* of gonorrhœa in any community, when carefully studied, will cause the innocent to marvel. The careful study of the disease shows in a remarkable manner how widespread are its advances. It requires the best heads and the finest skill to detect gonorrhœa in unsuspected corners. For example, take the studies of Dr. Sänger, of Leipsic, and note how he found gonorrhœa so much more frequently in his later studies than he did in his earlier ones. In some 2,000 women, in private and hospital practice, he diagnosed gonorrhœa in 12 per cent. Later he noted 18 per cent. of gonorrhœal cases among women. More recently he diagnosed 26 per cent. of gonorrhœa among his cases. Observe that his investigations enabled him to more than double his percentage. Swartze, of Halle, diagnosed gonorrhœa in 18 per cent. of 617 women. Oppenheimer, at Heidelberg, diagnosed gonorrhœa in 27 per cent. of 108 pregnant women. Lomer found the diplococci colonies in 56 per cent. of cases examined in the clinic of Schroeder. By careful study one can find gonorrhœa in about one-half the women who come to the ordinary gynæcological clinics. I feel positive in asserting that 75 per cent. of the cases in which I remove the appendages for pus in the tube or ovary are of gonorrhœal origin.

It is a common assertion of even general practitioners (who see the ordinary cases of clap) that 75 per cent. of men of the age of 25 acquire gonorrhœa in large cities. Hence it must be borne in mind that the frequency

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of clap varies in different communities and different nations.

Gonorrhœa also varies immensely in its virulence in different localities. I have noted that the gonorrhœa of seaboard towns is frequently very fatal. This can be easily verified by noting the kind of cases which arise in New York and Liverpool.

Syphilis varies in the same way.

I noted the appearance of gonorrhœa in Vienna, Berlin, London, Birmingham, and other cities. The most virulent gonorrhœa that I saw was in Birmingham; but in that same town syphilis was absolutely mild.

The variation of gonorrhœa as to locality is only in accord with other diseases, *e. g.*, scarlet fever, cholera, and puerperal fever.

In Birmingham, gonorrhœa in women was particularly virulent. This may account for the radical statement of Mr. Tait, who told me nineteen cases of pyosalpinx in twenty were from clap. I wish right here to note that I never stated that gonorrhœa was the cause of 95 per cent. of all cases of pyosalpinx, as Mr. Tait did when I was his pupil. But I may say, after studying gonorrhœa in women for a long time, that I do consider it very widespread—much more so than my colleagues in Chicago will admit.

I would venture that if those who decry the idea of the wide extension of gonorrhœa among all classes, would more vigorously study the disease, they would end as Dr. Sänger did; and that Dr. Sänger himself will increase his percentage by his more extended and recent studies.

The time will come when most men will recognize the terrible disasters of gonorrhœa. The time will no doubt soon be here when expectant fathers-in-law will not merely inquire into the financial standing of the son-in-law, but will carefully investigate the condition of his mucous membrane. The student of gonorrhœa in women doubts the propriety of a man with gonorrhœa hastily marrying. But the general practitioner will deliberately (but ignorantly) tell such a man to marry before the penis stops secreting. The amount of study by the general practitioner given to gonorrhœa is still very limited in this country. The wide range of the pathology of gonorrhœa is yet very inadequately impressed on the medical student.

No doubt the reason for the indifference of general practitioners in regard to the magnitude of gonorrhœa is that its immediate results are not severe. The remote effects of clap are the disasters which tell the story of a long course of pathology. The practitioner only sees the effect. He has forgotten the cause. The pathology of gonorrhœa will run a course of forty years and even then kill—*e.g.*, by stricture.

In this article I will consider the organs of a woman affected by gonorrhœal poison, and attempt to show some of the morbid effects which I have so many times witnessed.

In the first place, it may be generally understood that a woman is infected from her husband, who may have contracted gonorrhœa from one to ten or more years previously. The gonorrhœa has stuck to him for all these years, and when it is deposited on the fresh mucous membrane of the wife it will in all probability pursue a similar chronic (and sometimes acute) course with her. A man who has had latent clap for years may and does frequently, induce a penile discharge by the sexual excesses indulged in immediately subsequent to marriage. The irritation produced on the woman's genital organs, by enticing extra blood and exalting the glandular secretion, peculiarly fits her to become a suitable culture-medium for the gonococcus.

The evil effect of gonorrhœa on women is mainly chronic trouble, and the chronically diseased mucous membrane induces untold reflexes. The continued irritation from the mucous membrane, by reflexes flashed to every viscus, induces indigestion, malnutrition, anæmia, and neurosis. The reason that gonorrhœa is worse in woman than in man, is because of the peculiar periodic function of woman's genital apparatus. The tube and uterus have exalted activity every month, and this extra action brings extra blood and extra nutrition to the parts. The consequent extra glandular secretion gives splendid culture-media for any germs.

A woman may contract gonorrhœa and never know it, or she may know it from the start from changed conditions of the genitals. The gonorrhœa may declare itself: (*a*) in the eyes; (*b*) in the mouth and throat; (*c*) in the rectum; (*d*) in the genital canal.

1. A typical gonorrhœal attack will be

best described by noting the morbid condition of the genital tract. The first observable condition is that the vulvar mucous membrane is reddened. Vulvitis exists. The membrane is swollen, and an excessive amount of secretion exists on its surface. From the congestion and pressure on the periphery of the nerves ending in the vulva (pudic, small sciatic, and ileo-inguinal), she may complain of pain. The parts have a burning sensation. This redness so far confines itself to the vulva, and if one opens up the vagina it will appear normal.

2. Next, the gonorrheal virus spreads in two different directions: (*a*) in the urethra, and (*b*) into the vulvar glands. The urethral trouble arouses the woman by inducing painful and frequent urination. It may be asserted, honestly, that sudden burning and scalding in urination of a young woman is always suspicious of gonorrhœa; and it is almost certain, if the trouble endures for any length of time, that she has contracted a "local specific disease" which is almost incurable and ten times more dangerous than syphilis. Now the urethral irritation will last, generally, for some three weeks, more or less. It may exacerbate at the next monthly. But the woman is very conscious that she has had something she never had before, and she will give a very vivid account of it, especially if she acquired it innocently. The urine will be varied in color; it will contain extra mucus, and very often pus can be squeezed from the urethra by placing the index finger into the vagina an inch above the mouth of the urethra, and then slowly drawing the finger outward, all the time pressing on the urethra. The pus is broken-down epithelial cells.

Now the gonococcus thrives well in the urethra, as there are both cylindrical and glandular epithelia in this canal. The glandular epithelium lies in depressions or crypts in the urethral wall.

A most significant thing in gonorrhœa is the vulvo-vaginal gland situated near the junction of the lower end of the labium minor with the labium majus. When one can see a little red circle around the mouth of Bartholini's duct, it is suspicious; and when one can squeeze some yellow pus out of the duct, it is almost certain to be gonorrhœa. The gonococcus has penetrated the duct and attacked Bartholini's gland.

We have no better guide to gonorrhœa than Bartholini's gland. I have now examined so many, with confessions and non-confessions, and noted results, that I would say that if pus can be pressed out of both ducts, ninety-nine cases in a hundred are gonorrhœa.

So chronic catarrh of Bartholini's glands is pathognomonic of clap.

3. Now we must pass over the vagina, as it is almost always free from visible symptoms due to gonorrhœa. Vaginitis is a rare affection. The reason the gonococcus does not attack the vagina is because its surface is not lined with cylindrical epithelium. It is lined with squamous epithelium, and possesses scarcely any glands—only the semblance of glands, known as mucous crypts. The vaginal lining is not far removed from real skin, and the gonococcus does not attack skin.

4. The great home of the gonococcus is the endometrium (endocervicitis and endometritis). In the cervix and endometrium it thrives and exists indefinitely. It has here requisite conditions, which are: (*a*) cylindrical epithelial (and glandular) cells; (*b*) heat; and (*c*) moisture. This may be considered the palatial home of this aristocratic germ. It causes leucorrhœal discharges, due to breaking down of the uterine epithelium—both cervix and body. The discharge is nearly always yellow or tinged with yellow. Such women are ill at menstruation, and abort easily. At abortion they are frequently seriously ill.

This gonorrhœal endometritis often lasts years, with varied results. Modern gynæcological methods of inspecting and treating the endometrium are the only possible way of eradicating the gonorrhœal disease.

5. We now come to the endosalpinx—in other words, the lining membrane of the fallopian tube. It is simply a continuation of the endometrium, as I have frequently shown by the microscopical sections of fœtal tubes and uteri at their junction. They gradually merge one into the other. In fact, only for the round ligament as the inviolable landmark between uterus and tube, we would not always be able to distinguish uterus from tube.

The tubes have been the fighting-ground for gonorrhœa for some time. The general practitioner often denies that the terrible disasters of gonorrhœa in women are brought about by the presence of the gonococcus in the endosalpinx. I have now treated so many women with gonorrhœa in the tubes, and have also operated and removed the gonorrhœal tubes so often, that I feel convinced beyond all reasonable doubt that the great majority of all pyosalpinges are from gonorrhœa. A few, it is to be admitted, acquire pyosalpinx from puerperal sepsis, uterine cancer, actinomycosis, tuberculosis, and from dirty instrumental examination by tinkering doctors.

For some eight years I have been watching carefully diseases of women in Germany, Austria, England, and the United States. I should think that during that time I have examined six thousand women and have witnessed, assisted in, or operated myself, in hundreds of laparotomies. I am fully convinced that 80 per cent. of all pyosalpinges result from gonorrhœa. I also wish it understood that I consider that pyosalpinx may get well or end in a hydrosalpinx; *i. e.*, the pus in the pyosalpinx may be absorbed, and fluid or hydrosalpinx result—the starting-point of the pathological state having been, as in most cases of chronic pyosalpinx, gonorrhœa.

The most constant condition left in the tube after it has been infected with gonorrhœa, is *adhesions*. Adhesions are the remnants of peritonitis. Another remnant of changed conditions is hydrosalpinx.

The course of gonorrhœa in a fallopian tube is generally definite. First we have catarrhal endosalpingitis. The endosalpinx of the isthmus suffers least, but that of the ampulla (the outer two-thirds of the tube) suffers maihly. As the inflammation of the endosalpinx approaches the fimbriated extremity of the tube, it comes to a new membrane having squamous epithelium covering it. Now, it was shown that the gonococcus only grows well on cylindrical epithelium; but the peritoneum has not got cylindrical epithelium—so here ends the facile and rapid progress of the gonococcus.

But if the gonococcus does not thrive on peritoneum, it does another and a fortunate thing for the woman. The gonococcus irritates the peritoneum so that it throws out an exudate which soon closes up the fimbriated end of the tube so that the contents of the tube (pus, serum, mucus) cannot go into the peritoneal cavity. The fallopian tube at the abdominal ostium closes in two ways. It closes by slowly contracting and *entirely* turning *all* the fimbriæ back into the tube itself, where every fimbria lies coiled and platted like the petals of a rose. Such a process hermetically seals the tube; and the contents (infectious or non-infectious) are safely imprisoned unless the tubal wall bursts. This is the kind of pyosalpinx which gets well by absorption of the pus and leaving the serum (hydrosalpinx), which may finally become absorbed, leaving a functionless tube.

But this fortunate ending of gonorrhœal salpingitis (pyosalpinx) is far from being the only one. The chief course of gonorrhœal salpingitis is where the closure of the fimbriated end is not accomplished by turning all the fimbriæ back into the tubal lumen, but some few accidentally become strangled and left outside in the abdominal cavity. Now we have part of the fimbriæ inside the tubal lumen, and part inside the peritoneal cavity. This fact makes the great disaster in pyosalpinx of gonorrhœal origin. The fimbriæ left outside of the tube have a mucous membrane, and it is mucous membrane—not peritoneum—that perpetuates the gonococcus. These fimbriæ in the peritoneal cavity are the cause of the wide and extensive adhesions found in operating. The adhesions are produced by recurrent attacks of peritonitis due to the infection of the fimbriæ left in the peritoneal cavity. Generally the peritonitis recurs by invasion of infection from the abdominal ostium due to traumatic rupture; or during the monthly menstrual rhythm an exacerbation of the peritonitis takes place. In such cases the woman's pelvis is filled with exudate; she is a partial or complete invalid for years.

It must be borne in mind that abortion while the woman suffers from gonorrhœa are very disastrous. The virus seems to violently exacerbate, and dangerous peritonitis results. Again, the trauma arising from abortion may rupture some pathogenic cyst due to

previous gonorrhœa, and death may thus suddenly occur.

The wall of the tube must be studied to know what the effect of gonorrhœa is on it. The peritoneum of the tube is nearly always thickened and covered with flocculent, stringy adhesions in all stages of organization. Flakes of lymph or solidly organized bands may be observed. The muscular wall is not much altered, unless it be atrophied from the pressure of exudate.

The inflamed mucous membrane is where the exudate arises, so the tubal wall is thickened from the inside. The tube will often attain the size of a thumb or a broomstick. It remains convoluted and sacculated. The chief pathology lies in the ampulla. Such tubes are friable, and so easily broken that I have broken them from the uterus in enucleating them from their bed.

The mucous membrane is in most cases entirely destroyed by pressure. I had one gonorrhœal pyosalpinx where it could be demonstrated after removal that the tubal wall had previously ruptured three times, and it had made extensive peritoneal adhesions.

6. The ovary is the next structure that the gonococcus attacks. Ovarian disease is almost always secondary to tubal disease. I will give the result of my own investigations, worked out over a year ago. When the gonococcus in its journey has reached the abdominal ostium, it has come to the end of mucous membrane. But the germ thrives on cylindrical or glandular epithelium. The ovary is unfortunate enough to be covered by glandular or cylindrical epithelium, known as the "germinal epithelium" of Waldyer; so the gonococcus simply passes from the endosalpinx to the germinal epithelium covering the ovary.

The next step is the one which I especially offer as explaining cystic degeneration of the ovary. After the gonococcus has invaded the cylindrical or glandular epithelium of the ovary, it simply passes on to another group of germinal epithelial cells known as the membrana granulosa. The membrana granulosa is both glandular and cylindrical, and the gonococcus can thrive indefinitely in such a medium. The result is that the Graafian follicle does not ripen naturally. It does not rupture, but the membrana granulosa simply expands so that we get an ovary crowded with abnormally enlarged cysts or unruptured ova.

I am thoroughly convinced that this description fits gonorrhœal tubes, for I have examined large numbers. It is easy to demonstrate positively that the virus passes from the end of the tube to the ovary or peritoneum, for degenerate ovaries exhibit the course of the degenerative process, and old adhesions start at the abdominal ostium and spread through the pelvis. I have also made post-mortems where the tubal end was not closed and the yellow gonorrhœal pus would drip from the abdominal end of the tube as I held it up. In one of those very cases the woman died in four hours from leakage of pus into the peritoneal cavity, and the friends thought the doctor had killed her with hypodermatic injections of morphine. I could in this case easily exonerate the attending physician from all blame.

I have demonstrated in gonorrhœal disease that the tubes were fairly normal in appearance, but that deep in the interior of the ovary one or two teaspoonfuls of pus could be found. I have shown this in cases where gonorrhœa existed beyond the shadow of a doubt (and by confessions), by opening the ovary after I had removed it by laparotomy. In one such case I did laparotomy simply because the woman had continual recurrences of pelvic peritonitis; she would be almost clear from exudates at the intervals of the attack. But at one recurrence, when the ovary felt enlarged, I did laparotomy, and found considerable pus in the interior of the ovary. Her husband had had gonorrhœa five years before.

(*To be continued.*)

PNEUMONIA IN HIGH ALTITUDES.

BY J. M. HALLY, M.D.*

In presenting this subject, one may expect that a certain amount of criticism will be bestowed on his efforts, and that certain questions will naturally arise in the mind of those

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to whom the subject is presented, and who may be expected to understand the matter as well as the writer. The first question will probably be: Is not pneumonia pneumonia, anywhere and everywhere; but if different in high altitudes, why and in what respect? It may be stated, without fear of contradiction, that an egg is an egg; yet no one will question the assertion that an egg, according to conditions, may so change in character that the name is all that really remains unchanged. Although the analogy may not be perfect, the assertion may be safely made that the pneumonia of the text-books, with which all are familiar, the pneumonia of the eastern and southern regions, or in fact pneumonia anywhere in low altitudes, differs as much from the same malady in high altitudes as the egg of a day differs from the same egg discovered a year afterwards in a cheap restaurant.

It is not the writer's object to say anything in regard to the complications which are often met in this pathological condition. Reference is made to pneumonia pure and simple in mountainous districts, as compared with the same disease where the altitude is less, the air heavier and more fully supplied with oxygen.

One difference experienced by those who for the first time in high altitudes attempt efforts similar to those they were accustomed to in low altitudes, is that whereas but slight exertion may have been required to ascend a stair, small hill, or slight elevation, now the effort is more than they are equal to. The heart throbs, thumps, and labors excessively. The lungs feel as if almost empty, and the persons gasp and puff, vainly endeavoring to get air enough into the lungs to prevent their seeming collapse; while a tremulous feeling overcomes them, and a strangling sensation causes an anxious apprehensive expression, almost of anguish, to overspread the countenance, much like that often observed in persons suffering from a paroxysm of asthma.

It is well known that as we ascend to a higher from a low position the air is more rarefied—pressure is diminished, there being less of it to the square inch; and in order that the lungs may be filled they must labor harder, for less oxygen is transmitted through the air-passages in a given length of time; the blood is less thoroughly aërated; the heart, meeting with less resistance in consequence of diminished pressure, works more rapidly. All this excites the nervous system to increased and abnormal activity, so that, being deprived of its proper supply of good oxygenated blood, it soon becomes exhausted, and a state of depression pervades the whole physical structure. All this, be it observed, occurs to anyone making the same effort which in low altitudes would be followed by no perceptible results. In high altitudes there is constantly an exaggerated condition of the nervous system; and as this means an excessive expenditure of nervous energy, which in obedience to physiological law is invariably followed by exhaustion, there supervenes a pathological condition of the entire nervous system. This state or condition is influenced by temperament to a noticeable extent; and he who would be successful in the treatment of pneumonia in lofty regions must never lose sight of this fact, but direct all his efforts in accordance with the law of temperament—for nowhere must individual idiosyncrasies be taken into account so much as here.

"Whether we consider pneumonia as merely involving one vesicle, one lobe, or the entire lung, it has been classified under many heads and has received many names from the old authors. More modern writers give us three principal, with nearly a dozen names of lesser importance. But when we meet it at the bedside we fail to find difference sufficient to warrant such a classification."

It makes but little difference, as regards treatment, whether we have an inflammation of the interstitial fibres which connect the air-cells, or of the delicate lining of those air-cells; the treatment will be the same in the one as in the other. It is only after death that a difference is perceptible, and one eminent dissector denies the possibility of making a distinction even then. If we are assured that an inflammation exists, and are aware of its character and location, we know enough for all practical purposes; we will relieve our patients.

Pneumonia is usually divided into three stages: the stage of incubation, with chill or

rigor, being the first; the stage of active hyperæmia the second; and the third stage that in which relaxation takes place, with perspiration and a restoration of secretion.

With regard to the etiology and first stage little need be said, as the former is yet a mooted point with the authorities, and the latter is usually past before a physician is called.

It is believed by many that pneumonia is not a very alarming malady, and with good nursing and hygiene will get well of itself. Yet the evidence of a host of good men gives a mortality of from eight to twenty per hundred; and Prof. Pepper, of Philadelphia, speaking of pneumonia, says that the mortality varies from 30 to 60 per cent. if the mild circumscribed form be excluded, admitting the existence of such. He makes this statement in speaking of *catarrhal* pneumonia.

Years ago, when Dr. Hughs Bennett inaugurated what was called the restorative treatment, which consisted in poulticing the chest and supporting the vital forces, the results were very satisfactory, especially as the mortality was lessened. This, so far as it goes, proves that pneumonia can be treated successfully if the vital force is conserved. It also proves that it is a very depressing disease, even in low altitudes. But in the early history of mining in the mountains, a person stricken down with this disease was considered to have a very poor chance for life, and his recovery a thing to be hoped for but hardly expected, especially with routine treatment. Those physicians who have practiced long in the mountains, and who have become acquainted with the peculiarities of disease in those regions, on account of the nervous phenomena concomitant with all ailments high above the sea-level, are more successful than when they first began to practice there.

Pneumonia attacks its victims rather suddenly here; and it is no uncommon occurrence to find a strong man at work in the mine today, and in twenty-four hours find him a corpse, so overwhelmingly depressing is this disease, especially where the patient is or has been much addicted to the use of alcoholic stimulants, or has been a long time resident in the mountains at the expense of his nervous energy, which has been sapped by the constant strain due to the thin atmosphere.

Presuming that every educated physician is familiar with the symptoms of ordinary inflammation of the lungs, I will proceed to describe the treatment made use of by me for many years in this malady. The same treatment is used in pleuro-pneumonia as in pneumonia.

The first and most important step is to secure the very best nursing and hygiene possible; also to see that the temperature of the room is kept ranging from 68° to 75° F. Another factor in the treatment is to be sure that our remedies are first-class. That which will require our attention first in the train of symptoms will be the failing heart, and in order to sustain it and lessen the embarrassment under which it is laboring we select from our therapeutic armamentarium Cactus grandiflorus; this remedy, than which there is none better, should be administered in minute doses, $\frac{1}{10}$ to ½ minim, frequently repeated. Next relieve arterial tension, and free the system from all extraneous matter, which like an incubus oppresses the already overtaxed nervous system. For the relief of the overtense arterial and capillary systems, small doses of gelsemium or lobelia, according to indications, will afford ample satisfaction. The kidneys will usually be found engorged and congested, and instead of stimulation require rest, which can be given by a judicious use of jaborandi or Asclepias tuberosa, with occasionally a warm or hot pack, thus prompting the skin to vicarious action. As a sedative to those inflamed organs (the kidneys), the acetate of potassium will fill the bill, quickly and easily eliminating the solid constituents of the urine. There is present almost invariably a torpid condition of the hepatic viscus, with impairment of digestion; the former may be aroused and its function increased in activity, and the latter much improved, by instructing and encouraging the patient to drink freely of water as hot as can be borne, supplemented by enemata of warm water. Sleep can be induced by placing the occiput on a small pillow filled with moist hops, as hot as can be conveniently tolerated. A small sinapism applied in the same way to the

same spot gives good results also; about two-thirds flour or corn-meal, and one-third mustard, is strong enough for this purpose.

In cases where applications to the chest are required, it has been the writer's experience that hops, prepared as in the case of the aforesaid pillow and applied over the thoracic region, give the patient relief sooner than poulticing does; for, besides the heat, we get the analgesic effects from the anodyne properties of the hops. Again, the patient is not so liable to be chilled while a change is being made; and the hops are so much lighter and more agreeable to the sufferer.

When the pleural surfaces become inflamed or congested, and the pain and distressing dyspnœa are almost unbearable, these may be overcome, in most cases, by the use of Bryonia alba in small but oft-repeated quantities.

It will be observed, upon close investigation, that much of the pleuritic pain (so-called) is due to a neurotic condition and is really neuralgic in character. Cimicifuga is the remedy which may be relied on in this case; or salol will often render efficient service in such instances.

If the temperature is high, with a full, rapid, and bounding pulse, the remedy that will be found most reliable is veratrum, but it must be given in small doses or we will get the toxic action of the drug instead of the medicinal, and we will then have a state of depression supervene, which, with the depressed condition existing as an effect of the disease and altitude, is almost certain to change the prognosis from favorable to the reverse.

A physician friend of mine was attending a serious case of pneumonia, and, as the temperature was high, and other conditions indicated to him the use of veratrum, he was using that remedy with great care and in small doses. The friends of the patient, becoming alarmed, insisted on calling a certain physician in consultation from a distant town, who endorsed the treatment but suggested large doses of veratrum in order to produce sedation more rapidly; the attending physician demurred on account of his fears that collapse would ensue; he, however, finally acquiesced, as the consulting physician was the older and had a better name and more extensive practice. Large doses were given; sedation was speedily brought about, the pulse falling from 130 to 60 beats per minute, and the temperature from 103½° F. to 97½° F.; the respiration was reduced from 30 per minute to 15; all inside of ten hours from the time the first large dose was given. Stimulants were used freely to overcome the depression, but without avail; the patient died in eight hours more, making eighteen hours in all from the time the dose of veratrum was increased.

I would emphasize the necessity of great caution in the use of this valuable yet dangerous remedy; safety will be found in the small dose.

When the temperature persists in remaining high, the wet pack will give prompt and safe sedation if properly applied, care being taken, however, to have the feet warm and the head cool.

I have never used morphine or quinine in treating pneumonia, in a practice of many years in high altitudes; nor do I believe in the use of either drug in this disease, for the following reasons: Morphine dries up the secretions everywhere, and to a certain extent paralyzes the peripheral ends of the pulmonary nerves, thickening the exudations from the lungs and pleural membranes, and so increasing the necessity to expectorate while lessening the patient's ability to do so; also diminishing the sensibility of the lungs to the presence of a foreign substance. Quinine is depressing to the heart, after several hours' use of the drug, and should not be used in any case except where the skin is moist and the pulse soft and open—conditions I have seldom, if ever, found in pneumonia. It has been the writer's experience that a delirious or semi-delirious state was an almost constant concomitant of its use in antipyretic doses, and physicians have found it difficult if not impossible at times to keep the patient quiet in bed—he will watch for an opportunity to escape from bed, and if successful his escape is almost certain (in pneumonia) to be followed by relapse or aggravation of the symptoms, and frequently death.

In speaking of this, it may not be out of place to say just a word in regard to the care required by those who have gone

through an attack of lung fever and are just recovering. Probably the most important consideration is in reference to the sequelæ likely to follow this disease, which leaves behind it such a vulnerability of the system that for months, and occasionally years, any morbid influence however slight may prove an imsurmountable barrier to perfect recovery; leaving the person with a predisposition to disease or a broken-down constitution.

Prominent among the sequelæ will be found a very profound unbalancing of the nutritive processes. Prof. Pepper says in reference to this: "Further evidence of the profound disturbance of nutrition may be found in the occasional development of a marked rachitis and the much more frequent establishment of subsequent anæmia and debility."

Among other diseases occurring in connection with and subsequent to pneumonia, may be mentioned phthisis, or tuberculosis. And as this is one of the diseases that in the past has baffled the profession, and at the present is occupying a great deal of time and thought of some of the ablest men, and yet the problem of its prevention and treatment is seemingly as far from solution as ever, it behooves the physician to warn his patient, convalescing after pneumonia, to use every precaution against this too common sequel to his malady.

Among many others, one thing especially will tax the skill of the attendant, either in convalescence from pneumonia or in the first stage of phthisis, viz., sustaining the nutritive powers of the body, next supporting the weak and embarrassed heart, and the bringing about of a state of relaxation and rest to the overstrained nervous system.

It is the opinion of the writer that in a large percentage of cases where there is marked digestive derangement and general constitutional want of balance, the patient will be benefited and many sequelæ prevented by a change from a high to a low altitude where the climatic conditions are nearly similar, the only difference being in the altitude. Rest being a paramount consideration, there is or can be no better way of obtaining it than by removing from the stimulating effects of the light air to the calming and tranquillizing influences of a heavier atmosphere.

Denver, Col.

A CASE OF ANEURISM OF THE THORACIC AORTA.*

BY N. P. JELKS, M.D.

On the 30th of December, 1891, I was called to see R. G. L——, aged 34, banker, a man of great energy and will power; not very strong physically, but capable of great endurance—in fact, he never seemed to tire at any undertaking. I found him suffering with acute pain in third intercostal space, right side, with tenderness on pressure over a point the size of a half-dollar between nipple and sternum, one inch from nipple. Diagnosis: Intercostal neuralgia. The treatment was in accordance with the diagnosis. After three days' treatment he recovered sufficiently to attend to his business, but was never clear of pain.

On Feb. 1st following, I left home for Florida, remaining away two weeks. On my return I was called in again to see him, and found him in great pain. He had been confined to bed several days. During my absence, Dr. A. A. Smith had been called to treat him. His diagnosis was intercostal neuralgia. After three weeks' treatment with quinine, hypodermatic injections night and morning of morphine and atropia in large doses, counter-irritants, cupping, etc., he again improved sufficiently to leave his bed and attend to business, but never free from pain. I continued the hypodermatics once each day for several days. The pain became less intense, and his spirits were raised in proportion. The morphine was gradually left off.

On April 10th I was again summoned, and found him suffering most intensely. The pain was described as cutting or piercing in character, and extended through the chest to a point opposite posteriorly.

After two or three days' treatment of same kind described above, the point of tenderness and pain changed from the original site to within one inch of edge of sternum, same intercostal space.

* Read by title before the Georgia State Medical Association, April, 1893.

On April 16th I detected a very small tumor over seat of pain, but no pulsation; tenderness much increased. I hoped I had only a superficial abscess to deal with, but this hope was blasted.

On the 18th I detected slight pulsation. Fearing I had that frightfully painful and fatal disease, aortic aneurism, to encounter, I called in Dr. Smith again. He was in doubt, but suspected aneurism of the thoracic aorta. After treating the case for a week on the expectant plan, we found no improvement, but, on the contrary, a steady growth in tumor, with most intolerable pain. Although there was no bruit heard, though repeatedly examined with and without the stethoscope, we pronounced the case aneurism.

My patient and family becoming more alarmed, and being anxious to have help from an experienced surgeon, Dr. W. H. Elliott of Savannah was sent for, at the suggestion of my brother, Dr. E. A. Jelks, of Quitman. After a most careful examination, finding no abnormal sound in the trachea or tumor or any part of chest walls, his diagnosis was: a tumor situated in or near the arch of aorta, but not aneurism. Prognosis unfavorable.

Dr. C. H. Colding, of Savannah, also saw the case at the same time, and agreed with Dr. Elliott in his diagnosis. The latter aspirated the tumor and drew off a small quantity of thick, reddish-looking liquid, which, without submitting it to a chemical test, we thought was pus and blood. This confirmed Drs. Elliott and Colding in their diagnosis, and correspondingly relieved Dr. Smith and myself in ours. During the operation one-half of the tumor on the side the needle entered subsided to half its original size, and remained so for two hours, after which time it regained its original size and shape —oval in form. I wrote Dr. Elliott of the rapid refilling of tumor; and in his reply of May 2d this sentence occurs: "Whether this is an aneurism or not, one thing is plain, our patient must be kept out of suffering"—thus showing that his mind was then in doubt as to the diagnosis.

The week following his visit, I wrote Professors Austin Flint and J. Lewis Smith, of New York, and propounded this question (after giving them a brief history of the case): "Do aneurisms ever contain pus?" To this I received nothing satisfactory in reply.

The tumor continued to increase rapidly in size. Pain became a much more prominent symptom. I have never, in twenty-five years' practice, seen any patient suffer such constant and prolonged agony. At irregular intervals he would have paroxysms of most excruciating suffering, accompanied with symptoms of syncope. During these attacks, which were relieved with very large doses of morphia and atropia, he expressed himself as feeling like the tumor would burst open every second. These paroxysms always came on suddenly, accompanied with enlargement of tumor. This sudden enlargement of tumor was always followed by rapid reduction, which continued until the tumor returned to its original size.

On May 20th, Dr. E. A. Jelks of Quitman saw the case. He punctured the tumor, and drew off a drachm or two of the fluid contents of its cavity. This fluid was similar in appearance to that obtained by Dr. Elliott. Dr. Jelks's diagnosis was aneurism of arch of the aorta.

Tumor now grew more rapidly in size; pain much more intense, and extending occasionally down the right arm. So great was the suffering that my patient clamored for an operation of some kind.

On May 28th we again punctured tumor, and took out a small quantity of the fluid. This was sent to Dr. L. H. Jones, Professor of Chemistry in the Atlanta Medical College, and Dr. M. B. Hutchins, of Atlanta, to analyze.

Dr. Jones, after making the analysis, wrote: "I find that the fluid gives chemical evidence of albumin; responds to the chemical tests for pus; has a slightly alkaline reaction. Under the microscope, I find some red blood-corpuscles, but vastly more pus corpuscles. Judging from above facts and from the letter to Dr. Bizzell, which Mr. Jelks requested me to read, I should suppose that you have to deal with an accumulation of pus, and that the aspirating needle, when introduced, punctured some small vessel, thus pouring out some blood and giving the fluid a bloody appearance. That the

mass of the fluid is *pus*, I think admits of no doubt." (Italics my own.)

Dr. Hutchins writes: "The microscope showed me red and white blood-corpuscles and pus cells; a few epithelial cells, and micro-organisms usually seen in decomposing fluid, probably accidental. Not likely an aneurism."

The result of these tests was to place Dr. Smith and myself, as it were, "between two fires." On the one hand the clinical history and physical signs ("bruit" excepted) led us to pronounce the disease aneurism. On the other hand the previous statement of Dr. Elliott, who has seen many cases of aneurism, and the chemical and microscopical examination of the fluid, proved directly the opposite—not aneurism. For who had ever seen an aneurism whose contents were almost entirely composed of pus? No one could be found. So we consulted each other again, for the twentieth or thirtieth time, argued both sides of the question, and finally came to the conclusion we were wrong. We could not fight experience and judgment, armed with both chemistry and the microscope. We succumbed, and concluded that something must be done or we would soon lose the opportunity. Our patient was growing rapidly weaker; the tumor had assumed larger proportions, extending from one inch on left of edge of sternum 4½ inches to the right, breadth 4 inches, with general bulging of chest walls on right side. There was not at this time, nor previously during progress of the case, any marked difficulty in either breathing or swallowing. We decided to aspirate the tumor and draw off all of its contents, although it was evident the termination of the case would soon be fatal. The fluid which first flowed through the instrument was almost pure pus, with only a trace of blood. The patient, seeing this, exclaimed, "Thank the Lord!" The poor fellow rejoiced in the hope then of a speedy recovery, but alas! the hope was short-lived. This flow of pus was in a moment followed by the same fluid sent to Atlanta to be tested. After about one-half ounce of this was taken, pure blood began to flow. Becoming alarmed, we withdrew the needle, and closed the opening with adhesive plaster.

About the first of June, Dr. H. J. Williams of Macon was sent for, who, after a long examination, heard the aneurismal murmur posteriorly near the inner edge of scapula between third and fourth ribs. Nowhere else could it be found. This was the first time it had been heard in that region, although many times hunted for. From this time it could always be heard, but only there. The sounds over tumor continued the same as at first, similar to the normal heart sounds but exaggerated in intensity. There was, of course, no more doubt of the character of tumor. Dr. Williams informed patient of the nature of his disease and its probable early ending. He bore the sad news with his usual Christian fortitude, and answered, "It is all right."

On my visit the next morning, I saw that notwithstanding all the disappointments he had had during the tedious course of this most painful affection, hope had revived. I could scarcely tell which to admire most, the fortitude, faith, and hopefulness of the man, or the self-control and cheerfulness of his faithful, loving wife, who never at any time during his illness gave away to her feelings.

Tumor continued to grow, and patient clamored for another operation. Dr. Williams was called again on the 8th. After consultation we concluded to attempt the introduction of silver wire into cavity of tumor, as it gave some slight hope of causing coagulation of blood in cavity. The family were informed of our decision, also of the severeness of the operation, and consented to give him the benefit of the chance, slight as it was. He, of course, was willing and ready to submit to anything that gave the least hope, and was much more collected than his sorrowing mother.

The operation was not a success, it being impossible for Dr. Williams to introduce the wire—owing to its extreme smallness, as he thought. From the time of the operation, patient grew steadily and rapidly worse, and on the 20th of June he died in great agony during one of his paroxysms.

Throughout his whole illness, protracted (lasting six months) and painful as it was to a most extreme degree, no one ever heard him groan or utter a complaint, except his devoted wife and medical attendant, and then only when suffering with the awful

paroxysms. At the time of death, tumor was 5 inches in length and 4½ in breadth.

Post-mortem examination was refused by the family, although insisted on. This I very much regret, as it would undoubtedly have thrown much light on this very rare and interesting as well as instructive case.

This case has been reported because of the great difficulty in making a correct diagnosis, even after it had been under treatment for several months, although seen by some of the most skillful and experienced surgeons in the State; and because of the strange character the tumor presented: *First*, the complete absence of the "bruit" for months, and, when heard, found only posteriorly; *second*, the unusual character of its contents. I have seen no physician or surgeon who has ever seen or read of a case of aneurism containing pus in *decided* quantity; nor have I ever read of a case of that kind.

Hawkinsville, Ga.

"HYSTERICAL HEMIPLEGIA."*

BY W. T. SARLES, M.D.

As a member of the Committee on Neurology, I feel it a duty to assist, but must frankly state my standing as distinctly amateur in this department. The two following cases of pronounced "hysterical hemiplegia," and some of the practical lessons connected therewith, which have recently come under my care, lead me to present the same to this Society for the little they may add to this subject:

Case 1.—Miss Ella B——, aged 12 years, for the past six years an inmate of the State Public School for Dependent Children at Sparta, came under my professional care for the first time Feb. 27, 1893, on account of supposed "winter cholera." This case, with two others taken in like manner and time, and who the fourth day were discharged as convalescent, followed a similar attack the week previous of six children in an adjoining cottage, who all made rapid and uninterrupted recoveries. Two days later, being March 4th, I was hastily summoned with the announcement that the patient was found by the side of her bed on the floor and could not use her right arm and leg. Found patient with complete right hemiplegia—no marked nervous symptoms. Patient inclined to sleep easily, and as she was quiet and circulation good I left her in care of a nurse with little attention ordered until morning, when I had her removed to a single room in the hospital building on the grounds, where more quiet and better care could be furnished her.

At this date, March 5th, I made a test examination, assisted by my partner, Dr. D. C. Beebe; found electro-contractility of muscles of the affected side; tongue protruded at times to the affected side, at other times straight; facial muscles not affected, but at times appeared so to a degree; temperature 102.4°; pulse 100; pupillary reaction normal; patellar tendon reflex of affected side subnormal; muscles of chest not affected; muscles of right arm and leg completely paralyzed as regards motion, but not seriously as regards sensation; marked venous congestion; sluggish capillary circulation and subnormal temperature of affected arm and leg; mind clear, but some hesitancy in speech; patient lay on her back, inclined to the affected side; bowels somewhat constipated at this time, following her diarrhœa and vomiting of a few days previous; functions of bladder normal; has menstruated twice—the second time during this attack, but without pain or apparent abnormality either time.

"Doctor, what is your diagnosis and prognosis of this case?" I asked of my counsel; who answered that it was evidently organic in character, caused presumably by a lesion of the internal capsule of left side of brain, and that the patient would soon die. I had assumed the position that no organic lesion of the brain or cord existed, but that the case was one of pronounced "hysterical hemiplegia" and ought to recover; but as I had discharged her cured with others but two days previous, and now she was helplessly paralyzed, I was more ready to concur than to disagree with honorable and learned counsel. At this juncture my counsel tersely remarked he believed me half right, as the "hemiplegia" was evident to a blind man, but where was the history of any "hysteria?"

I give this bit of conversation to show how perplexing these recent cases are to two gen-

* Read before the Wisconsin State Medical Society, May, 1893.

ral practitioners who see the same case at he same time, but in directly different light s regards diagnosis and prognosis—two ssentials in any given case.

March 6th I was again hastily summoned, vith the statement that patient was having convulsions and was likely soon to die. I ow felt the weight of my counsel's position n the case, and would easily have been made o concur without further argument, but, rriving at her bedside, found her first calm, hen in a hysterical condition, laughing and rying almost simultaneously, with muscular witchings of unaffected side. The nurse lleged that "patient straightened out stiff vith well side, and that the affected side erked violently during her convulsions," vhich had ceased before my arrival. I ordered the use of codeine and pot. bromide or producing quiet, and the use, three times laily, of $\frac{1}{60}$ grain of strychnine and $\frac{1}{4}$ grain of aloin, and rubbing of the affected arm and leg vith alcohol twice a day. I now felt confident that the character of the hemiplegia was hysterical without doubt.

March 20th, the sixteenth day following her attack of hemiplegia, and during which time her right arm or leg had never moved a muscle voluntarily either awake or asleep, I commenced the daily use of electricity, using the faradic battery secondary current to arm and leg.

March 24th, slight voluntary movement of muscles of arm began; and on March 25th the muscles of leg asserted themselves.

April 1st, the patient walked down-stairs to the dining-room below, unassisted; and at this date, April 4th—just one month from date of complete hemiplegia—patient has normal use of right arm and leg, and is up and about in her usual health.

Case 2 is a woman 34 years of age, married and the mother of two children. Nearly two years ago patient came to me with a lacerated cervix uteri and much alleged nervousness, the laceration being of some four years' standing. I repaired the cervix, which healed favorably; and, following this, patient had a "hysterical bladder." During my absence patient fell into the hands of a neighbor physician for treatment for this latter trouble, and, being treated, as for inflammation, on the plan of douchings, etc., of that organ, she became rapidly worse. Withdrawing all direct treatment, and with no special treatment, she suddenly recovered from the bladder trouble. This was followed by "aphonia," which recovered largely after a short period of "placebo" treatment. Then followed hysterical cough. Finally, about nine months ago, patient developed right incomplete hemiplegia, manifestly hysterical in character, but which, though it defies all treatment at my command, I expect to see suddenly disappear some day as her other hysterical lesions have done.

Previous to my knowledge of this patient, her local physician, having exhausted his patience if not skill with the case, referred the matter to her husband, who took upon himself the duties of physician, and at times of her "hysterical spasms" would either throw her in a snow-bank or deluge her with water, and, as he alleges, with perfect results. However, I never have used such radical treatment, and am not a believer in many of the "cures" for "hysterics" and a "balky horse"—which in reality are quite alike—as advised by some pseudo-medical authorities.

The practical lessons to me in these two cases are: *First*, that among a number of cases of apparently like character in the same ward or household, one of entirely different character might be classed with those in general, and a false and erroneous diagnosis and prognosis given, and the embarrassment of the physician be in degree according to the station and circumstances of the case. *Second*, that when you get a case of hemiplegia in a young or middle-aged patient, you cannot be warranted in giving too hasty a diagnosis and prognosis, for often the best directed skill and observation will be unable to immediately arrive at the proper solution of the case. In the two cases just cited, the one complete and apparently in the beginning organic in character recovers rapidly and permanently, while the incomplete case remains as such after months of reasonable care and treatment. The *third* and to me important lesson is, that when you find a nervous and hysterical woman suffering from lacerated cervix, which you believe to be the cause of her reflexes, and which, as Prof. Fred. Byron Robinson says, is troubling her "abdominal brain," you are

justified in repairing the same, but you must not tell her to expect a speedy recovery, nor need you tell her she will have "hemiplegia," but don't feel disappointed if she does, and don't make her feel disappointed if she is at least one-half as long recovering her nerve equilibrium after the operation as she has been in neglecting to have the same performed.

The literature upon this subject of "hysterical hemiplegia" is not very exhaustive. Authorities give the left side as the one chiefly affected, and state that paralysis of sensation rather than motion is present in greatest degree. In the two recent cases in my limited experience the right side has been the one affected, and motion has been greatly in excess of sensation in degree of paralysis.

Certainly the simple reporting of these cases met by the general practitioner, which do not seem to harmonize with existing statistics, will assist the specialist in giving to us a more reliable and accurate class of literature in the several departments of medicine and surgery, and in none more needful at present than that of neurology.

Sparta, Wis.

THE DIAGNOSIS OF LOVE.

Dr. James Finlayson, in an historical review of Herophilus and Erasistratus (Glasgow Medical Journal, May, 1893), quotes a story from Plutarch concerning the latter. Antiochus, son of the king Seleucus, fell in love with his step-mother the young and beautiful Stratonice. His condition was extremely unhappy. He made the greatest efforts to conquer his passion, but they were of no avail. At last he resolved, in his despair, to rid himself of life, by neglecting all care of his person and abstaining from food; for this purpose he made sickness his pretense. Erasistratus easily discovered that his distemper was love; but it was difficult to conjecture who was the object. In order to find it out, he spent whole days in his chamber; and whenever any beautiful person of either sex entered it, he observed with great attention not only his looks, but every part and motion of the body which corresponds most with the passions of the soul. When others entered he was entirely unaffected, but when Stratonice came in, as she often did, either alone or with Seleucus, he showed all the symptoms described by Sappho: the faltering voice, the burning blush, the tumultuous pulse, and at length, the passion overcoming his spirits, a *deliquium* and mortal paleness.

Erasistratus concluded from these tokens that the prince was in love with Stratonice, and perceived that he intended to carry the secret with him to the grave. He saw the difficulty of breaking the matter to Seleucus; yet, depending upon the affection which the king had for his son, he ventured one day to tell him "that the young man's disorder was love, but love for which there was no remedy." The king, quite astonished, said, "How! love for which there is no remedy!" "It is certainly so," answered Erasistratus, "for he is in love with my wife." "What, Erasistratus!" said the king, "would you, who are my friend, refuse to give up your wife to my son when you see us in danger of losing our only hope?" "Nay, would *you* do such a thing," answered the physician, "though you are his father, if he was in love with Stratonice?" "O my friend," replied Seleucus, "how happy should I be if either God or man could remove his affections thither! I would give up my kingdom, so I could but keep Antiochus." He pronounced these words with so much emotion, and such a profusion of tears, that Erasistratus took him by the hand and said: "Then there is no need of Erasistratus. You, sir, who are a father, a husband, and a king, will be the best physician too for your family." Upon this Seleucus summoned the people to meet in full assembly, and told them it was his will and pleasure that Antiochus should intermarry with Stratonice, and that they should be declared King and Queen of the Upper Provinces.

For the cure of the young prince, Erasistratus is reported by Pliny to have received a fee of 100 talents, which is calculated as amounting to more than one hundred thousand dollars.

One peculiarity of the above case was that Sappho, a lady without professional claims, was the authority for the diagnosis, and Stratonice, a lady who had never expressed a desire to get a divorce, was prescribed without consultation to cure the case, while Erasistratus drew the fee.

Correspondence.

WHAT A HEALTH RESORT OF THE ITALIAN RIVIERA IS LIKE.

[Special Correspondence from a former resident.]

The present writer spent five months last year in the immediate vicinity of that secluded Arcadia of the Italian Riviera—Ospedaletti. Who has ever heard of the place? Few indeed! So let him tell you something you don't know, but ought to know.

The present account of the resort is treated solely from the medical man's view-point. It is not intended for the general reader, and its technics would be out of place in a general journal. Nor does he who pens these lines claim strict originality for the following. Credit to whom credit is due. Much of it is now translated for the first time from the recent interesting and skillful work of Dr. Ederling, of Ospedaletti. So faithfully has the translation been carried out that even some of the idiomatic peculiarities of expression of the original are retained.

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Climatological and Medical Observations by Mons. the Doctor Ederling.

Humidity of the Air.—The climate of the Riviera of the West passes in general for being dry, and this ought, after our observations, to apply in a special manner to Ospedaletti. The average of relative humidity is, in effect, during the months of winter, of about 62.5 per cent. The sea develops during the day an atmospheric humidity sufficient to supply a heavy dew for the succeeding evening. One must search for the cause of this relatively intense humidity of the air in the disposition of the places (sheltered country, planted lands, etc., etc.). This is, for the invalids, of capital importance. We will add that, precisely because of these favorable conditions, the air is much less charged here with dust than in all the other stations of the Riviera.

At Ospedaletti they do not know (it might be said) what clouds are: they keep themselves ordinarily at a great height above the level of the sea, or at least rest close to the slopes of Mount Nero. During our sojourn of three years, the snow has fallen only once —March 2, 1890—and it did not rest a long time; on the following day it had completely disappeared. Even during the cold winter of 1890–91 there was no snow, while one had announcements from Italy, Spain, and Algeria of enormous falls of snow.

The Sun.—The profoundly vivifying influence of the sun on the organism is a fact well known. The more the sun shines gaily and long, the better it accomplishes in us the phenomena of assimilation and of disassimilation. In general, and by way of consequence, our faculties, physical and intellectual, redouble their activity. This is why, in all the stations which are particularly favored with the sun, one ought to note with care how many hours of sun there are each day, and make an abstract of the clear days and of those which are more or less cloudy. One knows well enough that on these borders, clear and blue, of the Mediterranean, and particularly on the Riviera, the sun does not show itself niggardly of light and of heat; indeed, the sunshine of the Riviera has passed into a proverb.

But we have to note some interesting peculiarities. At the epoch when the days are shortest, one sees the sun surge from the sea in the morning, and replunge therein in the evening. Thus, even during the solstice of winter, one can see the sun in the sky for about nine hours daily.

The rays of the Levant sun commence by adorning the eminences of Bordighera; Ospedaletti is still in the amber. But when the star has passed the crupper of Cape Nero, its light invades at a stroke the entire territory of Ospedaletti, and persons the most delicate can at once go out in the country. This moment comes about, in winter, between eight and half-past in the morning, according to the months when one is there.

The Winds.—The privileged situation of Ospedaletti, which we have just described, shelters it completely from the cold north winds.

It is, then, very exceptionally that this which they call here the Tramontana (wind from the north) blows in the valleys from the heights of the Monte Nero and the Monte Caggio. It is the same with the wind from the northeast, of which the presence is not sensible to us except by the drift of the

clouds above our heads, and the ripples of the sea which extends before us. The winds which visit us the more often are from the southeast and the southwest (the wind from the south is rare). These hardly blow more than a few hours per day, ordinarily during the repast—so that the morning until 11, and the afternoon from 2 to 3 o'clock, are completely calm. According to the direction of the wind, there follows increased dryness or humidity.

We are justified in saying that Ospedaletti has a climate constant, soft, and warm. In that which concerns the months of summer, we can say solely that they are very dry, and that the heat, without being exaggerated there, is very constant: from whence results the accumulation in the soil of a very great quantity of caloric, which the earth renders afterwards by radiation during the winter. A topographical situation extraordinarily propitious had to exist for creating such a hibernal climate.

We will add that invalids find here the advantage of a perfect solitude and of an absolute tranquility, inasmuch as they can live outdoors nearly all the day. Thanks to this life in the open air, the contagious maladies are excessively rare here. During the three years of my sojourn, there was not a sole case of diphtheria, croup, exanthema, typhoid fever, or cholera. The inflnenza itself spared Ospedaletti in 1890–91 and 1891–92.

The simple description of the climatic conditions gives to the physician the indications which have reference to his art. Pulmonary maladies bring to the Riviera the greatest number of invalids. It is not claimed, however, by any person that the air is a specific particular remedy for these maladies. All those who have maladies of the heart (weakness in the action of) or of the liver, of the kidneys, or of the nerves, and all the convalescents in general, can come to sojourn at Ospedaletti. All who have need of repose, of an unlimited sojourn in the air vivifying and pure—those who would acquire fresh forces—all those can come with confidence to Ospedaletti.

Promenades—Excursions—Other Information.

The network of ways, ancient and new, of Ospedaletti, offers a grand number of promenades, which every one can combine to his liking and vary every day, according to his tastes and fantasies.

Commodious banks or seats have been placed in great number on all the ways. They were located, under the direction of a physician, in the spots particularly well sheltered and enjoying a beautiful view.

The principal ways are brought together between themselves, from the south to the north, by some good foot-paths (permitting of making the shortest cuts) constructed with care, and of which the incline is not excessive. The promenaders take these by-paths to save time. They can also rest in the open country till the moment when sounds the bell of the table-d'hôte, and return to the hotel in a few minutes.

Those who prefer not to go away, have at their disposition, according to their preferences, the sun and the shade, in the park or on the terrace of the corso Regina Margherita.

Games of cricket and of lawn-tennis are sometimes installed. One can demand the material of the games from the guardians of the casino.

One can go to the village of La Colle or Coldirodi, which crowns in a very picturesque manner the premier hills of the circus of Ospedaletti, by the via Cavour, the via Garibaldi, and the route Communale. The hôtel-de-ville of La Colle possesses an interesting collection of books, of manuscripts, and of tableaux bequeathed to his native country by the Abbé Rambaldi, who was the friend of Gioberti and of Silvio Pellico.

The promenader redescends to Ospedaletti by the muleteer road, or he can go towards San Remo by a rather pretty valley, of which the paths are unfortunately much less kept up than the vias of Ospedaletti.

At about a kilometer and a half to the west of Ospedaletti, right at the foot of the hill, is a spring of sulphurous water, which awaits a man of initiative to exploit its medical properties. This spring irrigates a land of alluvium, called La Guinchetto, enclosed between the railroad and the sea, and which forms a veritable oasis of the Orient, covered with venerable palms. Access thereto is facile, and the excursionist may, if he chooses, return by the sea-shore.

A kilometer further along, at the place called La Ruota, a horticulturist of Bordighera has created a vast garden, which promises to be of great beauty.

We recommend to those who do not fear climbing a little, the ascent of the Monte Nero. This is a simple promenade of three hours, to go and return. At the summit one has an extended view over the sea and the mountains. On clear mornings one distinguishes very well Corsica. This isle is also sometimes, but rarely, seen from Ospedaletti.

The two environing villes of San Remo and Bordighera are object-marks for traveling always indicated.

As to the other excursions which one can make on the coast and in the valleys—notably in those of La Roya and of La Nervia—they are well known and described in all the guides. We will not speak of them here. Our end was to make known the rare privileges of Ospedaletti—as to the beauty of the site, the climate, the well-being of the sojourners—and we have had to devote to this object all the space at our disposal.

There are three hotels, all good, but only one first-class. In the latter there is an elevator, and each room is supplied with an earthenware heating-stove.

The strangers will find to let, either for the winter season or for all the year, some furnished villas, as well as apartments furnished or non-furnished, great or small. The potable water, and the gas for lightage, are installed everywhere. The rents are extremely moderate, and there is not over all the Riviera another station where one can be lodged so economically as at Ospedaletti. Likewise, one will not find in any part elsewhere, at such low prices, such fine and proper lands for building purposes. The strangers have only to address, by correspondence, the Bureau of Vendings and Locations, corso Regina Margherita, which will respond very exactly.

Medicine and Pharmacy.

Invalids who have need of the permanent care of a physician, can come to Ospedaletti with all the more confidence since some doctors of every nationality pass the winter in this station, to care for their own health and to repose from the fatigues of their profession. A distinguished Swiss physician, Mons. the doctor Ederling, assistant of Mons. the professor Huguenin at the baths of Wissenburg, canton of Bern, resides all winter at Ospedaletti.

Mons. the doctor Altichieri, Italian, has opened, in rue Cavour, a *maison de santé* (asylum), with baths and hydrotherapic appointments, under the patronage of the masters of the school of Torino.

A pharmacy established in rue Victor Emmanuel is provided with medicaments according to the British, French, German, and Italian Pharmacopœias.

Communications.

All the trains stop at Ospedaletti.

The vehicles at Ospedaletti are obliged to conform to the same tariff as at San Remo.

A service of omnibuses regularly joins Ospedaletti to San Remo.

A bureau, situated in rue Victor Emmanuel, in proximity to the hotels, makes all the operations, postal and telegraphic, authorized by the regulations of the Italian administration.

The Town and the Country—Sanitary Dispositions.

Nature has done much for Ospedaletti. We now will see what has been done by man.

This little country has no history. A tradition, very ancient and unanimously accepted, permits the belief that the chevaliers hospitaliers of St. John of Jerusalem, while they carried the name of Chevaliers of Rhodes, had a commandery in this locality. Hence the official name of Coldirodi, given to the village of La Colla, chief-place of the commune, which has put at the head of its escutcheon the cross of Rhodes. Hence also the name of Ospedaletti, borrowed perhaps from a denomination of the chivalrous order, or may be from a hospital, constructed —they say—for the brothers fatigued by their fights against the Saracen. Therefore one of the hotel-owners of Ospedaletti, who has a creed of souvenirs, has not failed to put on his ensign the name of "Hôtel de Rhodes."

Whatever there may be in this, Ospedaletti

has rested, during some centuries, a poor burg of fishers, grouped in a bend of land of some meters, on the borders of the sea, and peopled by these hardy Italian mariners, habituated to face and struggle with the high sea on some tartans which merit well the name of wager-boats.

Attention was called to this humble village as soon as San Remo, the neighboring ville, took some development. In 1860 a celebrated practitioner of Russia, physician of Her Majesty the Empress Marie Alexandrowna, deputed to find in the litoral the point most favored for climate, designated Ospedaletti. Unhappily he could not there find, then, any resting-place worthy of sheltering the august sovereign. Ospedaletti rested therefore, as before, abandoned.

It was not in vain, however, that the medical man of the Czarina had vaunted this enchanting site and its climatologic conditions so exceptionally happy. In 1882 it was resolved to execute the works necessary for there creating a hibernal station.

How has this work been accomplished? Few words will suffice for telling.

We pass from the border of the sea to the background of the bay. Here is before us, at the foot of the inclines gentle and regular which rise up from the shore, the two lines (one close against the other) of the railway, and the grand route or highway. The former, more inflexible, traverses the rocky points of the two capes under some short tunnels. The latter, more supple, is seen to descend the hills of the west, and now remounts for clearing the extreme point of Cape Nero. Further, here is the main street in all its length, the few old houses of the hamlet, and the clock-tower of its church. Above the old village (from which it is completely isolated) the new ville is developing with completeness. Its edifices are in striking profile over the depths of verdure which the new streets cut with their riftings.

A sinuous street, the via Vittorio Emanuele, mounts to the corso Regina Margherita, grand boulevard, which, at its two extremities, resolves into the route de la Corniche, and forms, at 30 meters above the level of the sea, a magnificent terrace, perfectly horizontal, of the length of 1,500 meters. A foot-road, width of 10 meters, ornamented with palm trees and with tropical plants, offers a grand promenade and a splendid view.

In traversing this boulevard, you penetrate a magnificent park designed and planted at wish. In its vast enclosure, where circulate always the elegant groups of strangers and of residents—it is public for them, but the local population is there absolutely shut out—the habitations destined for the strangers have found their place. There is the principal hotel of the ville, where all has been provided for realizing the comfort which the most exacting may desire. Its long façade is exposed directly to the south, without any projecting mass or other obstacle to the solar rays which penetrate unto the end of all the apartments by the great bay-windows with which it is pierced. To the right of this is the second hotel, and some houses divided into furnished apartments—constructions more modest, but perfectly arranged also for assuring all the most favorable conditions of sojourn.

Here finally, to the left of the first hotel, is the casino. The terrace where it is situated overlooks the gardens and all the surroundings. The visitor walks up the high basement by way of three staircases of marble, corresponding to as many pavilions crowned with domes richly decorated. He gains thus the colonnade. This beautiful portico, closed on the side of the north, receiving in full the rays of the sun, commanding a view the most extended over the high sea, is admirably disposed for repose, or for promenade under cover. In the interior is a hibernal garden, a café-restaurant, etc., etc., always at the disposal of the residents for the *fêtes* of the winter season.

All these properties, we have said, emerge from the high foliations of a park which occupies the expanse of five hectares. This vast promenade, exclusively reserved for strangers, presents aspects the most varied. Some special cultures have been made to give to the part comprised between the two hotels before mentioned the name of Garden of the Palm Trees. Here is a magnificent group of old date-trees, which form a *salle* of verdure at the side of a gushing fountain. This group, which tempts each day the pencil of the loitering artist, is the most

beautiful of anything at Ospedaletti, but it is far from being unique; these enormous bouquets of date trees, of which the trunks touch each other and the leaves mix together, are not rare in the locality.

Going out from the Garden of the Palm Trees, westerly through the garden of the principal hotel, one has before himself an elliptic alley, which makes the tour of an orchard of mandarin-orange trees; it leaves to the left a grove of mimosas, to the right a plantation of palm trees. This double alley conducts to the garden of the casino, balmy with the scents of the roses and pinks. Down there by the casino, the west part of the park (called La Noria) is covered with a forest of gigantic old orange trees, under which is sheltered a copse of citron trees. Some streams of running water there keep up a fresh *gazon* or turf—an ornament which the millionaires obtain at great outlay in their seigniorial villas.

By successively climbing to four separate plateaus, we reach a height from which may be gained views of the grandest beauty. The journey may be shortened and its fatigues diminished by resorting to the mule route.

We terminate this chapter by an observation of great importance: The new vias of Ospedaletti are everywhere exposed to the full sun; they are also everywhere completely sheltered from the cold winds.

Have we not flattered too much the constructors in attributing to their ability these excellent results? Perhaps they have had still more of luck than of merit. Nature has some secrets which she delivers at times unexpectedly. Thus, after the constant experience made by the invalids and controlled by the medical men, it is found that the promenades the most beneficent are those of the corso Umberto, at 80 meters in altitude, and of the corso Garibaldi, 60 meters higher. The persons fatigued will there find, with an immense view and an absolute calm, an air subtle, light, vivifying, absolutely free from dust, little or not at all charged with marine emanations; a tranquil atmosphere, a temperature warm and equal. And it is thus that the regions which appear to be a trifle mountainous are not those which contribute the least to render salutary the sojourn at Ospedaletti. Already a pretty villa is seen perching on the heights of the via Garibaldi, and that will not be the last. L.

HONORS TO RENAUDOT: PHYSICIAN, JOURNALIST, AND HUMANITARIAN.

In connection with the recent celebration of Hospital Sunday in London, The Lancet refers as follows to the honors bestowed in France upon the memory of Renaudot, who may be styled the originator of the hospital renaissance in Europe:

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All that is most estimable in Parisian society assembled on Sunday, June 4th, in the rue Lutèce, to do honor to a great, though tardily appreciated, Frenchman, Théophraste Renaudot, founder of the Assistance Publique à Domicile, and—through his Gazette for procuring work for the unemployed—the father of journalistic enterprise in France. The commemorative movement which culminated in the ceremony was initiated by Dr. Gilles de la Tourette, whose biography of Renaudot has assumed the place of a French classic, whilst the president of the committee organized *ad hoc* was the distinguished publicist, M. Jules Claretie. The monument itself—a lifelike statue of the philanthropic physician in sitting posture in the act of giving ear to some poor applicant for work or medical assistance—is a *chef d'œuvre* of the sculptor Boucher, and, on its being unveiled before the vast and brilliant assemblage, seemed, in the very suddenness of the process, to typify the new light that had dawned on the people of Paris, not only as to the merits, but as to the very existence of one of their greatest benefactors. The details of the monument, especially in the inscriptions engraved on the sides of the pedestal, tell the story of the man whose name and date of birth and death are all that are set forth on its front: "Théophraste Renaudot, 1586–1653." One of these inscriptions announces, in Renaudot's seventeenth-century French, how vain it is for the State, foreign or domestic, to try to stem the diffusion of journalism, which "*tient cela de la nature des torrents qu'elle se grossit par la résistance;*" the other admonishes the rich as to their duty towards the poor, significantly

warning them of the danger of allowing the contrast between wealth and poverty, comfort and misery, to become too sharply defined. Such is the monument, such the lessons of its subject, revealed to Paris—and indeed to France—on June 4th; an event surely as eloquent as the most powerful homily preached that day from any French pulpit, fraught with the old, old moral as to the prophet who has no honor in his day and generation and whose voice is that of one crying in the wilderness. Had those in high places or sitting in authority only grasped and acted up to the true significance of Renaudot's work and teaching, how much bitter experience might France and the world have been spared. How effectively would have been forestalled, a century and a half later, the horrors of the *lanterne* and the guillotine.

M. Dupuy, President of the Council, dwelt on the fortunate coincidence of Renaudot's combination of philanthropic impulse with medical training. A physician before his time, whom even Molière must have spared, an observer of nature and a practitioner according to the "natural-history method" of nineteenth-century science, Renaudot, by his institution of a consulting-room for pauper patients in his own house, of clinical wards for very urgent cases, and of a laboratory for the aid or correction of diagnosis as well as for the preparation of medicaments, made his humble home the nucleus of a medical school on lines far more advanced than those of the contemporary faculty. It was in 1640 that he instituted his system of Assistance Publique à Domicile; but this again had grown out of an antecedent undertaking—the starting of a journal, the Gazette, designed to advertise the names, the characters, the qualifications, and the addresses of the honest, well intentioned poor in want of work. It was in listening to many a touching tale of the unemployed that he became cognizant of the ill-health, the wasting disease, the impending dissolution of the applicant or his family, and that he set himself, whilst publishing the services which the poor petitioner could render, to relieve the present wants, and above all keep the shadow of death from his door. Two most beneficent institutions were thus inaugurated in the France of the seventeenth century by the humanity, the sagacity, and the enterprise of this conspicuously noble Frenchman—the Gazette rapidly developing from a kind of private inquiry register into a medium of publicity for information of universal interest, and the Assistance Publique à Domicile ripening into the system which, in its present working, ranks amongst the most honorable that Paris can boast.

How far-reaching as well as sagacious was Renaudot's philanthropy, was illustrated by the speakers who followed the French Premier. M. Jules Claretie, in commenting on the opposition encountered by the Gazette from seventeenth-century Absolutism, referred to the controversies in which its editor became involved and to the lusty strokes he dealt out to his unscrupulous opponents; but the journalistic punishment he administered was really salutary to the public cause; as Camille des Moulins put it, "like the spear of Achilles his pen healed the wounds it inflicted." He prepared the popular mind for free and fair discussion of traditional systems and time-honored abuses, and is, as M. Dupuy claimed him to be, "the father of the French newspaper press." Again, Dr. Brouardel, speaking for the Faculty of Medicine, pointed out that among his reforms was the importation from Italy, after a visit to that country, of Monts-de-Piété as a resource available by the poor against the exactions of the usurer; but even this method of relieving present wants he safeguarded by a system of inspection, prominent in which was the appointment of supervisors whose duty it was to prevent the removal of infected wearing apparel from the owner's house to the Mont-de-Piété. This, said Dr. Brouardel, was the beginning of a long series of regulations now recognized and actually in working in State medicine. So that the very privations and necessities of the abandoned or downtrodden of the soldiers on life's march became the occasion of devising reforms and safeguards for the battalions about to follow. *Væ victis* might in one sense be pronounced over them; but, as Dr. de Grasset, the delegate from Montpellier, remarked, their very sufferings were, under Renaudot's inspiration, made to redound to the good of posterity, and *Gloria victis* might well replace the compassionate rubric.

J. W.

PAN-AMERICAN MEDICAL CONGRESS—SECTION ON GYNÆCOLOGY AND ABDOMINAL SURGERY.

All members of the medical profession are cordially invited to attend the meetings of this section to be held in Washington, Sept. 5th, 6th, 7th, and 8th.

The sessions promise to be exceptionally interesting, many valuable papers having been contributed. Those who may wish to read papers before this section and who have not yet sent in their titles and skeleton abstracts are requested to do so at once.

Papers have already been contributed by the following distinguished gentlemen from the United States and Canada: Drs. T. Johnson Alloway, Montreal, Can.; A. W. Abbott, Minneapolis, Minn.; J. M. Baldy, Philadelphia, Pa.; H. J. Boldt, New York City; Augustus P. Clarke, Cambridge, Mass.; Ernest W. Cushing, Boston, Mass.; Andrew F. Currier, New York City; L. H. Dunning, Indianapolis, Ind.; Geo. R. Deane, Spartansburg, S.C.; W. E. B. Davis, Birmingham, Ala.; Joseph Eastman, Indianapolis, Ind.; Geo. M. Edebohls, New York City; De Saussure Ford, Augusta, Ga.; William Gardner, Montreal, Can.; T. H. Hawkins, Denver, Col.; John R. Haynes, Los Angeles, Cal.; Edw. W. Jenks, Detroit, Mich.; Jos. Taber Johnson, Washington, D.C.; Howard A. Kelly, Baltimore, Md.; Florian Krug, New York City; G. Betton Massey, Philadelphia, Pa.; Lewis S. McMurtry, Louisville, Ky.; R. B. Maury, Memphis, Tenn.; Wm. F. Myers, Ft. Wayne, Ind.; E. E. Montgomery, Philadelphia, Pa.; Robert T. Morris, New York City; Chas. P. Noble, Philadelphia, Pa.; Jos. Price, Philadelphia, Pa.; Geo. H. Rohé, Baltimore, Md.; Jas. F. W. Ross, Toronto, Can.; Chas. A. L. Reed, Cincinnati, O.; I. S. Stone, Washington, D.C.; R. Stansbury Sutton, Pittsburgh, Pa.; T. Algernon Temple, Toronto, Can.; A. Vander Veer, Albany, N.Y.; W. B. Ward, Topeka, Kan.

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The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., JULY 10, 1893.

Editorial.

"HEADINE."

Our South American colleagues have caught the gold-fever and nostrum craze. Observing the many reports appearing in North American medical journals regarding the wonderful success William A. Hammond has had (and expects to continue to have) with his new trademarked extracts denominated "Cerebrine," "Cardine," "Testine," "Medulline," etc., etc., and failing to find among these an *ine* that would refer to the head as a whole, instead of merely to a special organ pertaining to that portion of the human economy, they have invented and placed upon the market a new secret remedy, denominated "Headine," and which is claimed as: "An active remedy against migraine and nervous headaches."

Thus Dr. Hammond, and the Columbia Chemical Co. of which he is President and a large stockholder, may at the meeting of the Pan-American Medical Congress find they have a competitor in a patent-medicine dealer, who will, in such case, doubtless, present a paper regarding the marvelous successes that South American physicians have had with his new remedy. If Hammond can write up his new (*sic!*) discoveries in the medical press, why cannot some physician from South America be hired to read a like paper for the benefit of the proprietor of "Headine" before the same Congress?

The Pharm. Centralhalle, of Dresden, Germany, obtained and analyzed a portion of "Headine," which appears to be a mixture of:

Acetanilid	68.73
Bicarbonate of sodium	31.57

with a little coloring-matter.

"Headine" has the advantage of Hammond's *ines* in that there is really something in it, and that, moreover, it does not profess to require six, eight, or twelve months to mix the ingredients.

What is the next one?

THE PAN-AMERICAN MEDICAL CONGRESS EXCURSION TO ROME.

It has been definitely determined that the Pan-American Medical Congress excursion to the Eleventh International Medical Congress will sail on the steamship "Werra" from New York, Sept. 9th, the day following the adjournment of the Congress at Washington, and will arrive at Genoa Sept. 20th, four days before the opening of the Rome meeting.

Round-trip steamer tickets may be procured for $142.50 for inside rooms, and $150 and upwards for outside rooms. Tickets are good for members of the Congress and their families, and may be used at option of holder to return on any steamer of the line from Genoa, or on Saturday steamers from Bremen, or Sunday steamers from Southampton, during the months of October, November, and December. Physicians desiring to avail themselves of this exceptionally low rate should at once become members of the Pan-American Medical Congress by sending the registration fee ($10) to the Treasurer, Dr. A. M. Owen, Evansville, Ind., and informing the Secretary-General, Dr. Chas. A. L. Reed, Cincinnati, of their intention to join the excursion. Passage should be secured without delay, as the trip, involving as it will a stop at the Azores and Gibraltar and a sixty-hours sail along the picturesque coasts of Spain, France, and Italy, promises to be very popular. Many prominent European guests of the Pan-American Congress will return on this occasion. The time allowed will afford American physicians an opportunity to not only attend the International Congress and visit Rome, but to extend their journey to the famous sanatoria of South France and the Riviera. In this connection we refer the reader to a communication in this issue of the AGE, describing the topography and sanatory advantages of Ospedaletti, on the Mediterranean, under the title, "What a Health Resort of the Riviera is Like."

THERAPEUTICAL SUPERSTITION.

In the Medical Record of July 8th, under the above caption, appears a paper by Dr. George T. Welch, of Passaic, N. J., that is not alone most interesting *per se*, but likewise of especial value just at this period, because of its historical reminiscences. We exceedingly regret that we are not permitted to reproduce the article *in toto*, owing to lack of space; however, on page 415 of this issue will be found an excerpt therefrom.

Dr. Welch opens his paper in the following language: "Recent researches into obsolete medical works have convinced me that an old scientific book is not more valuable in any other way than it is in what it represents as a landmark of the attainment of thought and speculation up to the very hour that it issued from the press. Truth changes its aspect; what we have thought was an eternal principle was some issue caught motionless at a turn of the tide. When we have believed penetration could go no farther, some fresher genius has taken the trail, and disappeared, after shining for a moment upon a farther upland."

With this as a text the author presents *seriatim* the progress in therapeutical superstition from the dark ages to the present, and likewise refers to Dr. W. A. Hammond, who, "with fine insistence, appropriates all, except the hint from Brown-Séquard, of this fantastic pharmacology."

The readers of the AGE have, no doubt, seen the whole, or an abstract, of the paper of Dr. Hammond "On Certain Organic Extracts, their Preparation, and Physiological and Therapeutical Effects," originally published in the New York Medical Journal, January 28th, 1893, and since reproduced in various forms in a majority of the medical journals, to say nothing of the North American Review and various lay publications, and likewise as a reprint or circular. And, undoubtedly, the query has repeatedly arisen: Why should this paper be so frequently reproduced in protean form to the disregard of others, unless based upon therapeutic superstition and fantastic pharmacology?

It would appear, from statements made by no less an authority than Dr. Hammond himself, that the word "Cerebrine" is claimed as private property, and, moreover, trade-

marked; that "The Columbia Chemical Company, of New York, are alone authorized by me to handle the animal extracts made by my own processes, and that are made in my own laboratory, under my own supervision."

No matter how much credence the medical profession might be induced to put upon the statements of Dr. Hammond owing to the fact the paper was published in the New York Medical Journal, can anyone now, with the full knowledge that the paper in question was written and published solely for a mercenary end, admit any confidence in either the medical theory or the therapeutic value of "Cerebrine," "Testine," *et al.?* Indeed, it would seem as if the reputation as well as self-interest of the profession should demand an explanation from Dr. Hammond; and it, moreover, appears somewhat singular after the military experience of this individual that he should attempt in the guise of a scientific communication to foist such an insult upon the medical public.

PHYSICAL AND MENTAL ATHLETICISM.

On this subject, the London Lancet says:

It is true that there are numerous instances of young men at our public schools and universities who achieve a large measure of success in both physical and mental directions; still they are the exceptions and not the rule. We feel quite confident that the mental work and strain, with the concomitant in-door confinement, entailed by a system of competitive examinations, is physically injurious in many ways, and that he is a very exceptional boy who achieves success in both directions at the age at which competitive examinations are usually undertaken. We are speaking now of the hard reading and hard thinking inseparable from preparing for these examinations—not of mental power or intellectual robustness, good judgment, mental freshness and originality of conception, for these qualities are natural gifts, which, as often as not, are weakened if not altogether destroyed by a "cramming" process, just as they are strenghthened by hard physical work and wholesome occupation in the open air with copious draughts of light literature by way of mental diet.

A competitive literary examination, such as that for the Indian Civil Service for example, at the best secures high averages in mental culture; it does not necessarily secure—it may even exclude—young men of superior intellectual capacity whose powers mature later in life, and it is no gauge of qualities of character. But the point to which we would direct attention is this—that hard mental and physical exercises are, with rare exceptions, incompatible. Within certain limits the one aids the other, in that physical exercises and out-door pursuits tend to maintain the health and promote the vigorous flow of the sap within, but beyond those limits the manifestation of energy in one direction lessens the amount that is available for the other.

THE DIAGNOSIS OF CHOLERA.

In a recent communication to the Zeitschrift f. Hygiene, Koch draws attention to the fact that it is now admitted, even by those who deny the causal relation of the comma bacillus to the disease, that it is invariably present in all cases of cholera, and that, moreover, it is not found under other conditions. This being the case, it is a matter of prime importance that the presence of the cholera vibrio should be easily and rapidly demonstrable. The plate method, though useful where the organisms are present in large numbers and where a couple of days are available for the process, is not rapid enough in many cases of emergency. Koch has therefore been working out the best means of recognizing the comma bacillus in the dejecta from cholera patients. His methods are equally valuable in helping to determine the presence of the vibrio in water fouled by choleraic dejecta.

In about half the cases examined, a rapid microscopic examination of the materials forwarded to him from various parts of Germany enabled him to telegraph, almost immediately, that the patient from whom the dejecta had come was affected with cholera. In the mucous threads and flakes examined under the microscope, the cholera bacilli are arranged in groups in which the single bacilli run parallel to one another like a shoal of small fish following one another in a stream of water. This appearance Koch regards as so characteristic that where it is present he does not hesitate to form a diagnosis. In

nearly half the cases this microscopic examination was insufficient, and it was necessary to have recourse to other methods, among which was a modification of the "Maas" culture as adapted by Gruber and Schottelius to the growth of the cholera organism in a medium specially favorable for its development. Dunham, working at the "cholera red" reaction, suggested a 1-per-cent. peptone solution with ½ per cent. common salt as a medium in which the organism would grow, and would in its growth reduce the nitrates to nitrites and also form indol, so that on the addition of hydrochloric or sulphuric acid the "red" reaction was readily obtained. Dunham then found that the cholera vibrio grew in this peptone mixture at an enormously greater rate than the other organisms found in the alimentary tract, and from the fact that it has a great "oxygen hunger" an almost pure culture may often be obtained from the surface of the peptone medium. Koch finds that even better results are obtained by the use of 1 per cent. salt instead of ½ per cent.; and by utilizing this Maas method along with the gelatin and agar plate methods and Hueppe's method of intraperitoneal injection, he was able to make an accurate and rapid diagnosis in all the cases submitted to him.

The cholera-red reaction could be obtained in about six hours, and colonies can be recognized on agar plates in eight to ten hours.

The presence of the cholera vibrio was demonstrated in the Elbe water, as met with at Hamburg, Altona, and Nietleben, and also in a well at Altona, and in slop water and tap water at the Institute of Nietleben; the decisive proof being furnished in every case by the presence of the cholera-red reaction and by experiments on animals.

The bacteriological methods involved are delicate, and the process must be done with technical precision. Once mastered, however, the method should prove both rapid and reliable.

BIRDS OF A FEATHER FLOCK TOGETHER.

It is a matter of no surprise to see the scurrilous circular of Dr. W. A. Hammond attacking Parke, Davis & Co., reproduced in the columns of the New England Medical Monthly.

Book Notices.

THE POET—IS HE BORN NOT MADE? By Dr. Robert Fletcher, ex-President of the Anthropological Society of Washington. Washington: Judd & Detweiler. 1893.

An idea of this half-hour essay, set off with terse opinions and poetic gems from authorities best qualified to speak *ex cathedra* on the question, may be gathered from the concluding paragraph: "I have endeavored to show that the greatest poets are those who have loved truth and wisdom above all things; who have striven valiantly after all attainable knowledge; have deeply studied the human mind and its passions; have observed nature with close scrutiny; have mastered to the extent of their opportunities the treasures of poetry and prose in their own and other tongues, and have diligently sought to perfect their art in melody and method. When to the divine birthright some share of these qualities which are attainable only by labor is added, are we not justified in saying that the poet was born and was made?"

INTERNATIONAL CLINICS. Vol. I, Third Series, 1893. J. B. Lippincott Company, Philadelphia.

The task of describing the contents of this volume in anything like adequacy of detail is so far beyond the limits of our space that we must be content to indicate the nature of the message by the names only of the messengers. As to the mechanical execution of the book, it is perfect. The contributors are: J. M. Anders, Edmund Andrews, John Ashhurst, Jr., William Easterly Ashton, P. Brouardel, Henry T. Byford, Charles Cary, Henry C. Coe, Floyd M. Crandall, B. Farquhar Curtis, F. X. Dercum, O. B. Douglas, Sir Dyce Duckworth, David W. Finlay, George B. Fowler, J. McFadden Gaston, Arpad G. Gerster, William Goodell, A. Pearce Gould, E. Fletcher Ingals, A. Reeves Jackson, Charles H. Knight, George M. Lefferts, M. D. Mann, E. E. Montgomery, William Oliver Moore, H. H. Mudd, Paul F. Mundé, J. H. Musser, A. H. Ohmann-Dumesnil, Thomas Oliver, Roswell Park, Robert William Parker, Frank S. Parsons, William Pepper, Michel Peter, Thomas R. Pooley, William H. Porter, James Jackson Putnam, Oliver P. Rex, J. Scott

Riddell, John B. Roberts, Beverley Robinson, A. Ernest Sansom, Robert Saundby, George L. Sinclair, J. Greig Smith, Charles G. Stockton, J. Bland Sutton, W. Hale White.

McClure's Magazine. S. S. McClure, Limited, 743–745 Broadway, New York City.

A novelty in magazine literature has been introduced by S. S. McClure, who presents in the first issue of his magazine a real dialogue between W. D. Howells and Professor H. H. Boyesen. Mr. Howells and Professor Boyesen have been intimate friends for more than twenty years, and in this dialogue Mr. Howells tells much that is new about his early home, his newspaper correspondence work in Venice, his attempts on his return from abroad to secure a footing in journalism and literature. The same issue of the magazine contains eight portraits of Mr. Howells taken at different periods of his life.

Mr. Howells, Bret Harte, Mrs. Burnett, Sarah Orne Jewett, Octave Thanet, Rudyard Kipling, Conan Doyle, Joel Chandler Harris, and Thomas Hardy are among the list of writers of short stories for McClure's Magazine.

Limitation of the Family. By Frederick Wallace Abbott. M.D., Taunton, Mass. Published by the Author. Price, 25 cents.

This little pamphlet reads itself, it is so clearly, so elegantly printed; besides, it concerns a subject of absorbing interest. Dr. Abbott notes the fact that many married people dread the natural increase of the family, and resort to various devices to prevent it; he finds most of these devices injurious to health, to say nothing of the moral effect, which he does not pretend to cover on the present occasion. The object of the plain speech of Dr. Abbott is to put his fellow-physicians "on," as the phrase is, to the real cause of many of the nervous maladies of their patients, by directing attention to the habits these patients have formed of first violating the laws of nature and then concealing the fact; and this violation is of two kinds—excessive venery, and unnatural frustration of the forces set in motion by sexual indulgence. The laity ought to know better; and the doctors cannot be excused for not informing them when opportunity arises.

Clinical Study and Analysis of One Thousand Cases of Psoriasis. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital. A reprint.

A physician who can truthfully say he has treated 25,443 cases of skin disease, and has been able to classify them under eighty-odd separate heads, is certainly entitled to a hearing. This is Dr. Bulkley's position. He admits that psoriasis is a difficult thing to understand, and therefore difficult to cure; it is, he says, "so far as is known, always produced by the same cause, although little or nothing is known accurately in regard to the nature of the cause." Its prevalence relatively to other skin diseases varies with the locality, which leads the author to suggest that great and trying changes of temperature, with much moisture, as in New York, Chicago, and Toronto, favor the development of this disease, for in the warmer climate of Baltimore and St. Louis it is much less prevalent; New York's percentage is more than double that of Baltimore's. Among 7,076 cases of skin diseases observed in private practice, Dr. Bulkley found 2,350 cases of eczema, 1,547 of acne, 460 of syphilis, 322 of psoriasis, and a less number of alopecia, tinea, and other varieties.

As to treatment of psoriasis, diet is important, also hygienic surroundings; medication internally should have reference to the general condition of the patient, arsenic being perhaps singly and alone the one remedy of greatest value; locally, among other applications, the Doctor uses in many cases white precipitate in an ointment with bismuth and carbolic acid. The author believes psoriasis to be not a local skin disease, but a manifestation of some underlying constitutional condition, behind which is a process of sub-oxidation and acidity, often exhibiting itself in rheumatic and gouty symptoms.

P. Blakiston, Son & Co., 1012 Walnut St., Philadelphia, announce the following medical works now ready:

Allen, Harlan, Harte, Van Harlingen. A Handbook of Local Therapeutics, being a practical

description of all those agents used in the local treatment of Diseases of the Eye, Ear, Nose, Throat, Mouth, Rectum, Vagina, Skin, etc., etc., such as Ointments, Plasters, Powders, Lotions, Inhalations, Suppositories, Bougies, Tampons, etc., and the proper methods of preparing and applying them. By Harrison Allen, M. D., George C. Harlan, M. D., Richard H. Harte, M. D., and Arthur Van Harlingen, M. D. 8vo. Cloth, $4.00.

DALBY. Diseases and Injuries of the Ear. By Sir William B. Dalby, M.D., Aural Surgeon to St. George's Hospital, London. Fourth Edition. 28 woodcuts and 7 colored plates. 12mo. Cloth, $3.50.

HORWITZ. Compend of Surgery, including Minor Surgery, Bandaging, Amputations, Fractures, Dislocations, Surgical Diseases, and the Latest Antiseptic Rules, etc., with Differential Diagnosis and Treatment. By Orville Horwitz, B.S., M.D., Professor of Genito-Urinary Diseases, late Demonstrator of Surgery, Jefferson Medical College. Fifth Edition. Enlarged. 167 illustrations. 98 formulæ. 12mo. No. 9 Quiz-Compend Series. Cloth, $1.00. Interleaved for notes, $1.25.

KENWOOD. Public Health Laboratory Work. By H. R. Kenwood, M. B., D. Ph., F.C.S., Instructor in Hygienic Laboratory, University College, London. 116 illustrations and 3 plates. 12mo. Cloth, $3.00.

MOULLIN. Surgery. Second Edition, by Hamilton. By C. W. Mansell Moullin, M.A , M.D. (Oxon), F.R.C.S., Surgeon and Lecturer on Physiology to the London Hospital. Second American Edition. Edited by John B. Hamilton, M.D., LL.D., Professor of the Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago. 600 illustrations, many of which are printed in colors. Octavo. Cloth, net, $7.00; leather, net, $8.00; half Russia, net, $9.00.

NAPHEYS' Modern Therapeutics. Ninth Revised and Improved Edition. In Two Handsome Volumes. Edited by Allen J. Smith, M.D., Professor of Pathology, University of Texas, Galveston, and J. Aubrey Davis, M.D., Assistant Demonstrator of Obstetrics, University of Pennsylvania. Vol. II: General Surgery, Obstetrics, and Diseases of Women. 8vo. Half Russia, net, $6.00.

SHAWE. Notes for Visiting Nurses, and all those interested in the working and organization of District, Visiting, or Parochial Nurse Societies. By Rosalind Gillette Shawe, District Nurse for the Brooklyn Red Cross Society. With an Appendix explaining the organization and working of various Visiting and District Nurse Societies, by Helen C. Jenks, of Philadelphia. 12mo. Cloth, $1.00.

TYSON. Guide to the Examination of Urine. Eighth Edition. Colored plates and numerous illustrations. Revised. 12mo. Cloth, $1.50.

Notes and News.

Cooking by Electricity.—

Messrs. Verity, of Regent street, have got together a small exhibition of electric cooking appliances, which will be of interest to those who would like to know where we stand in regard to this application of electricity. The system adopted is simplicity itself, and whether the object be to bake, to boil or to fry, or merely to warm a room, the heat is produced in the same way. A thin wire of a special alloy is curled round into any shape which may be required, is coated with enamel, by which oxidation is prevented and insulation is secured, and the whole is imbedded in a layer of asbestos packing, held firmly between two iron plates of the requisite size and form. When the current is passed through the wire it makes it hot, and, although no doubt the wire itself becomes red-hot, the heat becomes diffused through the whole of the iron plate before it gets to the surface, and thus is presented to the cook in a manageable form. In some cases these "heaters" are built into the bottom of kettles and frying-pans, which then only require the current turning on to do their work; in others they take the form of flat hot plates of various forms, on which pans and kettles can be placed, and cooking carried on in the ordinary way. An oven can be raised to a temperature of 350°; and a room-warmer is also shown, a sort of iron-work fire-screen which, when the current is turned on, becomes itself a means of giving heat.

As regards cost, we are informed, in general terms, that the small-sized heaters, such as would boil a tea-kettle, use about as much electricity as an ordinary sixteen-candle light. But we have not yet been furnished, as promised, with the exact data to verify this statement.

Whether electric cooking apparatus will be much used in kitchens, depends on many things having but small relation to either electricity or expense, notably on the education of the cook, but we cannot doubt that there will be a rapid demand for heaters, such as are here exhibited, for boiling tea-kettles, keeping the breakfast warm, and all

such things as are at present done by means of spirit lamps.—*British Medical Journal*, June 10, 1893.

Fees for Medical Service to Millionaires.—

The two physicians who attended John W. Mackay, the California millionaire, in his recent illness, have sent in bills for $5,000 and $7,500 respectively. Mr. Mackay refuses to pay them, on the ground that the sums charged are exorbitant. We do not know the amount of service rendered, but if the rates exceeded the maximum fees, and if an extra sum was added, as is alleged, because Mr. Mackay is a multiple-millionaire, our sympathies are with him. A physician has no more right to treble his fees because a man is rich than has a tradesman to treble the price for his wares. There are circumstances, however, when the service rendered is so directly saving of life and suffering, and where the attendance involves so much responsibility both for the life of the patient and the reputation of the surgeon, that it is difficult to say what should be the fee. Ordinary rules and rates do not apply here.—*Medical Record*, June 24, 1893.

The Hamburg Water-Supply.—

Hamburg is now supplied exclusively with filtered water; the old point of supply in the Elbe has been closed. But, as all the filters projected are not yet completed, the full quantity of water is not yet available, and the people of Hamburg are earnestly requested by placards posted everywhere to make the most sparing use of the water. Garden-watering with water taken from the pipes is forbidden, and all street-watering has ceased. Meanwhile the unfinished filters are being pushed forward with all possible haste, so that this unpleasant state of things will shortly come to an end.

An American medical officer has been sent to Hamburg by the United States Government to watch the ships bound from Hamburg to America, and to furnish bills of health for them.—*British Medical Journal.*

Grants for Scientific Research.—

The Scientific Grants Committee of the British Medical Association announces that it is empowered to receive applications for grants in aid of researches for the advancement of medicine and the allied sciences. Applications for sums to be granted at the next annual meeting should be made without delay to the Honorary Secretary of the Committee, Mr. Ernest Hart, or to the General Secretary, at the office of the Association, 429 Strand, W.C. Applications must include details of the precise character and objects of the research which is proposed.—*British Medical Journal*, June 10, 1893.

A Fever Enunciator.—

The Paris correspondent of the Lancet describes an electrical system, recently invented, to be used in a hospital ward in much the same way as an automatic fire-alarm system in a mill. Each patient is to have in his axilla an apparatus connected with an electric enunciator, which rings an alarm if the temperature rises above a certain point.

Scholarships to Medical Students.—

In order to encourage graduates of literary and scientific schools to undertake the study of medicine, the College of Physicians and Surgeons, of Chicago, offers ten scholarships, each of which is valued at $100 a year, for three years, to such applicants as present evidence of the best qualifications for medical study.

Columbia College.—

At the one hundred and thirty-ninth commencement of Columbia College, held at the Carnegie Music Hall, New York City, on June 14th, the degree of M.D. was conferred by President Low on 104 graduates of the Medical Department of the College of Physicians and Surgeons of New York.

It Makes the Clinic Laugh.—

The ludicrous spectacle of Dr. W. A. Hammond suing Parke, Davis & Co. for infringing on his rights concerning the manufacture of organic extracts and for breach of medical ethics, is before the profession.—*Omaha Clinic.*

Inspection on the Michigan Frontier.—

Secretary Baker is engaged in a contest with railway corporations to determine whether the sanitary inspection laws of Michigan shall be enforced or not.

Therapeutic Brevities.

A New Method of Auscultatory Percussion.—I have recently employed a form of auscultatory percussion which I believe to be new, and which will sometimes aid in detecting shades of differential dullness not easily determined by ordinary methods.

In carrying it out the binaural stethoscope is fitted with the small extremity intended for examining the heart, but this, instead of being applied to the chest, is held between the patient's teeth, and the lips are closed around it. During the percussion the nostrils are compressed with the fingers.

It will be seen that in this method there is a confined column of air reaching uninterruptedly from the interior of the patient's lung to the drum-membrane of the examiner's ear. Impulses communicated to this column are completely shut in, and none of the sound-waves are lost. The length of the sound-waves will be in proportion to the elasticity of solid structures acted upon by the percussing finger. If there is no solid tissue beneath to dampen the vibrations of the chest-wall, the waves will be long, the pitch low, and the tone resonant. If, on the other hand, the vibrations are muffled by deposit in the lung, the waves will be short, the pitch high, and the tone flat and woody.

The effect does not differ in kind from that obtained in ordinary percussion, but its intensity is much greater.

In examining the back of the chest a stethoscope with unusually long tubes is necessary, or in the absence of this the percussion may be made by an assistant.—Andrew H. Smith, M.D., New York, in *Medical Record*, June 24, 1893.

Aspidospermine.—Dr. G. Bordet states that the aspidospermine of commerce is a mixture of several products derived from the *Quebracho aspidosperma*, but it possesses practically the properties, excepting the antithermic, which is stronger than the contained quebrachine, of the pure alkaloid. It increases the depth and amplitude of the respiratory movements, slows the heart, and lowers the temperature. Huchard has recommended this drug in dyspnœa of functional origin. The dose is from 1 to 2 grains, which is soluble in water, with the addition of a few drops of a 10-per-cent. solution of sulphuric acid, which, however, should be neutralized by bicarbonate of soda, if it is intended for hypodermatic use.—*Les Nouveaux Remèdes*, 1893, No. 6, p. 135.

Medical Progress.

Treatment by Means of Blood-Serum.—One of the most interesting problems of modern scientific medicine is that relating to the prophylaxis or cure of infectious diseases by so modifying the blood as to prevent the development or to arrest the progress of those maladies. The underlying principle which animates these most interesting and important researches is the modification of the blood-serum in such a manner as to render it destructive to certain specific bacterial products. We have heretofore given in these columns an account of the suggestive work of Dr. Klemperer in regard to pneumonia. What Pasteur has accomplished for the therapy of rabies, Behring and his collaborators have sought to do for that other severe traumatic infection, tetanus. Dr. Behring has recently published a second volume, announcing the results of his continued experience. For a concise *résumé* of the main points of this volume we are indebted to an esteemed German contemporary.* Dr. Behring affirms that tetanus in the human being may be cured by the injection of immunized serum, just as certainly as in the lower animals who were the subjects of experiment. The quantity, or dose, however, of the modified serum must bear a certain relation to the increased body-weight. The requisite dose for men must exceed that curative to tetanized mice or rabbits in the same proportion that the weight of man surpasses that of the little creatures mentioned.

Furthermore, the curative virtues of a serum stand in constant relation to its power of producing immunity, and finds, indeed, in the latter its most appropriate estimation, though the varying intensity of the serum and the different stages of the disease render the determination very difficult. For instance, 0.00005 gramme of immunized serum will protect a mouse weighing 20 grammes; that is, 1 part of serum to 1,000,000 parts of body-weight will protect the animal from the action of the minimum fatal dose of tetanus poison. But an animal that has been infected by this minimum fatal dose, and in which the earliest symptoms of the disease have been manifested, will require at least a thousand times the prophylactic dose if its life is to be saved. When the case is somewhat advanced, 10,000 or 100,000 times the dose is demanded, and a stronger protective serum than 1:1,000,000 must be used in order that the volume injected shall not be too large. When these calculations are applied to the human sub-

* Deutsche Medizinal-Zeitung, Jan. 30, 1893.

ject, it has been determined that 0.1 centimeter is requisite in order to immunize an individual weighing 100 kilogrammes, while at least 100 cubic centimeters are needed to cure the developed disease in a person of the same weight. If the symptoms are severe, the dose must be still further increased. In order to arrive at an exact conclusion respecting the therapeutical value of the serum in the case of man, the statistics must embrace a large number of cases, since we know that a favorable result sometimes takes place spontaneously in tetanus. Dr. Behring has recently prepared a curative serum from the horse, having the strength of 1:10,000,000, which he hopes to raise to the tenth power, and by means of it to reduce the mortality of the disease from its present mortality of 80 or 85 per cent. to 5 or 10 per cent.

The distinct peculiarity of this method of treatment consists in the direct conveyance of a complete protective material to the system of the subject of the disease. The longer the stage of incubation, the more favorable becomes the prognosis. The more chronic the course of the malady, the more beneficial is the result of the treatment. The appearance of the tetanus poison in the blood or urine is regarded as worthless, from a prognostic point of view. On the other hand, the detection of immunizing substances in the urine is of favorable augury. As regards the method of application, subcutaneous injection is recommended. The addition of 5-per-cent. carbolic acid is the best means of preserving the serum. In the prosecution of further studies, Dr. Behring announces that he is now able to distribute among physicians a sufficient quantity of serum to be used in the treatment of cases.

The curative value of the serum can be much more accurately tested in animals than in men, because the degree of the infection can be regulated at the will of the experimenter. In this connection, Behring and Casper report the results of the treatment of sheep and horses suffering from tetanus. A sheep in which manifestations of the malady had been evident for thirty-six hours, and which would presumably perish in eight hours, could not be rescued by the administration of 100 cubic centimeters. On the other hand, two sheep, in which 50 cubic centimeters were injected on the day when undoubted symptoms first appeared (three days after experimental infection with enough material to cause death), were completely restored to health in six days. The same result was obtained in a horse in which the first symptoms of tetanus appeared three days after infection. Upon the first day of the malady 400 cubic centimeters were injected, and 300 cubic centimeters upon the second and the third days. Eight days after beginning of the treatment the animal was restored to health. What we all wish, however, as practical physicians called upon from time to time to treat this severe and mortal malady, is to know the value of the proposed method in tetanus as it occurs in the human subject. Experiments upon animals, though interesting from the purely scientific point of view, are only useful to practitioners in so far as their results are capable of being applied to human patients.

Dr. J. Rotter, senior, surgeon to St. Hedwig's Hospital, in Berlin, has had an opportunity of applying the blood-serum therapy to a case of tetanus, and reports the results in the Deutsche Medicinische Wochenschrift for February 16, 1893. The patient was a man, 25 years of age, who, on July 6, 1892, was slightly wounded in the hand by an iron hook. Eight days later the fingers of the affected hand became stiff. On the fifteenth day trismus, and on the sixteenth day rigidity of the muscles of the abdomen and back, appeared. On the eighteenth day the lower limbs became stiff. On the twenty-second day the muscles of the neck and trunk were as hard as boards. The teeth were clenched. Attempts to move produced a strong sense of oppression and dyspnœa. On this day the first injection was made with serum furnished by Dr. Behring. A second injection was made on the following day. On the third day after beginning this treatment, the patient felt better, and the stiffness was somewhat less marked. He received a third injection, and on the fourth day the rigidity was decidedly less marked. The patient was able to move himself with difficulty, when assisted. On the fifth day a fourth injection was made, and on the same day the operation was repeated for the last time. Improvement was steady from this time, and on the 9th of August, nine days after the final injection, the patient left his bed. On the 17th of August he left the hospital, and by the 22d all trace of rigidity had vanished. The nine injections proved the harmlessness of the serum. No untoward constitutional effects were manifested. No inflammation was produced at the sites of the operations.

The favorable result obtained in this not very promising case leads us to hope that our German *confrères* will continue their clinical experiments until, by a study of a sufficiently large series of cases, we are able to arrive at definite conclusions concerning the worth of the proposed method. — *Medical Bulletin*, May, 1893.

ANIMAL EXTRACTS AS THERAPEUTIC AGENTS.—We published lately an article by Professor Brown-Séquard, in which he gives a summary of his experiments on the effects of the injection of the extracts of various organs. These experiments have been published before in various Continental journals, and readers of our Epitome will have noticed week by week abstracts of these, as well as of those by other workers on the same lines.

It is now some years since Brown-Séquard announced the wonderful effects which followed the subcutaneous injection of testicular extracts as exemplified in his own person; and though many jeered at him as the discoverer of the secret of perpetual youth, the notion has steadily gained ground that there is, after all, something in it. Since, also, the success that has followed the injection of thyroid extract in myxœdema, we can hardly wonder that this belief has increased.

Physiologists have recently been making a number of observations, which show that many organs do more than what was formerly regarded as their functions. The experiments of Bradford on the kidney have shown that this organ does something else in addition to excreting urine; those of Minkowski and v. Mering on pancreatic diabetes, of Langlois and Abelous on the suprarenal capsules, and of Horsley and others on the thyroid, have led to the introduction of the expression "internal secretion." We think that this term is a rather unfortunately chosen one; but it, nevertheless, expresses that the organs in question have some action on the blood, and through it on the tissues generally, which influences their metabolic changes. Previous, however, to any of these experiments, it was a perfectly well recognized fact that removal of the essential organs of generation had a profound influence on the structure of the whole animal, and also on the mental tendencies of the individual.

But the precise *modus operandi* is in all these cases still a sealed book. The composition of the internal secretion, where it exists, is unknown. It is, however, presumed that an extract of the fresh organ must contain the active substance in the conglomeration of bodies which are extracted by glycerin, salt solutions, or whatever the solvent used may be. There can be little doubt that these substances are of a complex organic nature, substances which call on the resources of the organism to manufacture for itself. We can, therefore, hardly be surprised that if these substances are administered to a debilitated person unable to make them for himself, some amount of temporary stimulant effect is produced; and in one instance at least—that of myxœdema—the curative result has justified the method used.

Fully granting this, we still feel compelled to doubt many of the other so-called cures. There is in all men a natural tendency to draw general conclusions from particular instances, to seize an idea and run it to death. In the causation of disease at one time it is germs, at another ptomaines, at another toxalbumoses, that are invoked to solve every mystery and explain every difficulty. In the treatment of disease, at one time mineral drugs, at another chemical drugs produced in the laboratory, are fashionable; at one time protective inoculation, at another curative inoculation is in the ascendant. All causes and all treatments have their proper places, but we may hope that we are not now to suffer an epidemic of universal injections. We hear of some injecting nerve extracts to cure neurasthenia and locomotor ataxy, heart extracts to cure heart disease, pancreatic extracts to cure diabetes, testicular extracts to cure old age and many other evils, including even phthisis and cancer.

Manufacturing chemists are making extracts not only of thyroid, but of nearly every other organ in the body, even including the pituitary body, this last for the cure of acromegaly. We find medical men writing of these ideas and of the cures achieved in the most sanguine strain, and often upon no better evidence than quacks produce for their "cures." These injections may be and often are extremely poisonous; for although Brown-Séquard states that he has observed a rise of temperature only twice in 100,000 injections, we must remember Wooldridge's experiments; and we recollect, too, having heard of sloughing following injection of pancreas for diabetes. This last result is hardly surprising, for a pancreatic extract will contain not only the "internal secretion" but the external secretion also, and trypsin is a very powerful digestant, especially of tissues prone to disintegrate, like those of a diabetic.

Perhaps Massalongo* has hit the right nail on the head in an article he entitles "A New Phase of Suggestive Therapeutics." He found that in healthy animals testicular fluid had no effect; that in cases of disease the modifications are slight and transitory, and due to psychical tension and excitement; that in organic disease the improvement is due to suggestion and the influence of the imagination; and that such curative effects

* Rif. Med., February, 1893.

are best marked in cases of hysteria and neurasthenia, when there are expectations of relief, and that equally good results were here obtained by inert substances with equal facility.

One more quotation in conclusion. Professor Brown-Séquard says: "To our utter surprise, the disease that gave the greatest number of ameliorations is cancer superficially situated." We confess that we cannot share this surprise; the recent developments of Matteism should have prepared Professor Brown-Séquard to guard against the fallacies into which he has unwittingly dropped.—*British Medical Journal*, June 17, 1893.

"KYPHOSIS BICYCLISTARUM," OR THE BICYCLIST'S STOOP.—M. Henri de Parville, in one of the charming papers in which he interprets science for the general public, sets forth the advantages and disadvantages of that mode of vicarious or semi-vicarious progression known as "bicycling." Having explained the mechanism of the vehicle itself, he proceeds to vindicate its uses in our high-pressure age and then to treat them from the hygienic point of view. He entrenches himself behind the "many physicians distinguished in an eminent degree," who are addicted to bicyling, and he appeals to their authority in praise of the exercise as a means of bringing the muscles into play, developing the respiratory system, improving the circulation, clearing the deeper-seated viscera of congestion, sending the blood to the integument, and, above all, reacting in the most healthful way on the nerve centres. At the same time, the exercise is liable to abuse, and in the "velocipedomania" which he finds in the ascendant he sees occasion to sound a note of warning. One evil traceable to bicycling, though not amongst those enumerated by him, is the confirmed "stoop" which has already declared itself in many "wheelmen"—a result, indeed, so common in the less strongly built bicyclists of the Continent as to have found its way into classification as the "kyphosis bicyclistarum." The dorsal curvature posteriorly—kyphosis proper—which used to be rare in boys under fourteen years of age, is, now that the bicycle is so largely used even before puberty, very frequently met with, particularly amongst those young bicyclists whose spinal column is developing more rapidly than the ligaments and muscles, and in whose case, therefore, the equilibrium between those several parts is more or less disturbed. Were it merely an unsightly deformity, the "stoop" in question ought to be combated in every way; but confirmed dorsal curvature posteriorly has sequelæ of its own quite mischievous enough to call for immediate and effective counteraction. The displacement, embarrassed functional activity, and arrested or diseased development of the thoracic viscera, which kyphosis inevitably induces, are all too serious to warrant the slightest neglect in remedying them, if only to obviate recourse to orthopædic apparatus. Exercise of a kind to accustom the spinal column to an action directly antagonistic to the "inclination forward" of the bicyclist's attitude is what is manifestly indicated, and the use of the Indian clubs or some similar means of incurvating the spine anteriorly, throwing out the chest, and maintaining the head erect should be practiced with that object.—*The Lancet*, June 10, 1893.

THERAPEUTIC SUPERSTITION.—Dr. George T. Welsh, writing on this subject in the Medical Record of July 8, 1893, says among other things:

I have searched a large number of the pamphlets and medical journals of all classes, during the past three months, so that I might note the therapeutical extremes in this quarter of the latest years of the closing century. Brown-Séquard and his disciples are patiently engaged in the injections of organic liquids. He is not rejuvenating octogenarians, with spermatin, so frequently and successfully as at the first blush, in 1889, but he records here and there, in a dreary waste of experiments, that extract of the thyroid gland injected into somebody with myxœdema has metomorphosed the patient. Constantin Paul and Professor Babes are transfusing extract of the gray matter for neurasthenia. Injections of the extract of pancreas are being tried for diabetes. In diseases of the heart, injections have been made with the extract of cardiac muscle. Dieulafoy has tried injections of extract of kidney on a man affected with uræmia. Dr. Paul Gibier kindly announces through a contributor in his own journal that he has tried extract of cat muscle in cases of progressive muscular atrophy, after failure with other methods, and gracefully adds that, "he will probably report later on this subject."

Dr. William A. Hammond, with fine insistence, appropriates all, except the hint from Brown-Séquard, of this fantastic pharmacology. He has made alkaloids of the different organs and portions of the ox, and proposes to do away with all other drugs, and cure and renew like with like, giving an eye for an eye, and a tooth for a tooth, like the Hebrews of old, while he opens up new

fields to the apothecaries beyond the dreams of avarice. The medicine will come dear, but so all things do in art, and it is the simplicity and ready applicability of the remedies that must recommend them. Dr. Hammond questions whether, among all the teeming brains that have swelled and broken on the shores of time, such a solution of the vexed question of therapeutics has ever presented itself, though dimly conscious that he may have heard of some old German who speculated on the probable results of giving a liver diet to men diseased in the liver.

What pain it is to a great inventor to find that his speculations were distilling long ago in the alembic of another's brain! And yet so active have been men's minds that there are few things said, done, or conjectured, but that the spark was struck forth in immemorial days. Eighteen very old men, said Theodore Parker, could touch hands back to the birth of Christ, and in my researches into old books I never yet found one that did not allude to some book more ancient still, and to names of scholars of dates still beyond, whose monographs and treatises have clean mouldered away in the crypts of time.

As far out of the central darkness of the Middle Ages as the seventeenth century, I find in Schroeder's "Chymical Dictionary," 1669, that the physicians of his day, upon the same hypothesis that Hammond has proceeded, and Brown-Séquard before him, used the different animal glands and tissues, in medicine, for the cure of distempers in corresponding parts in man. The work of Culpepper, 1653, gives some recipes for preparing fox lungs into a loloch for the cure of asthmas and inflammations of the lungs, and he recommends duck livers as being exceedingly strenthening to the liver. But Schroeder, whom Cullen respectfully criticises as an authority in his day, is more elaborate in his treatise, and quotes from Crato, Baubin, Jordan, Libavius, Crollius, and others, now no longer obtainable, as I am told by librarians whom I have consulted.

In his fifth book, Zoology, he treats of that "Part of Pharmacy that shews what Medicines are to be taken from Animals," and he gives, with anxious concern, explicit directions for the choice of animals that "have no diseased dispositions," and orders that they shall be killed by external violence, to the end that "the medicamental substances of everything fit to act, shall be without diseases, and full of wholesome tinctures."

For the relief of impotence in the man, or sterility in women, he recommends the testes of the boar, and quotes Schwenkenfield as an authority for the use of the same glands from the stag, for a similar purpose. For disease of the liver, he urges the use of the liver of the calf, the hare, the wolf, and the fox. The spleen of the calf and of the fox, he asserts, will cure diseases of the spleen, and lung diseases are benefited by medicines made from the lungs of the fox. Drachm doses of the powder of wolf's intestines would cure colics. The dried uterus of the hare, "taken after the terms, would help conception." For weakness of the bladder, he directs a sheep's or goat's bladder to be calcined and given. And in the first and second books of his Dispensatory he gives at great length the methods to be employed in preparing these animal drugs for exhibition.

But more daring that our modern therapeutists, he deals with the body of man himself, as being so much good material for medicine that it should not be wasted on a final resurrection, but should be raised up in the living bodies of those who languish. The physicians of the day employed in their practice the following parts and excrements of the living body of man: the hair, nails, saliva, perspiration, milk, secundines, spermatic fluid, and things unmentionable. And from the dead body, the flesh, the skin, the oil, the bones, the brain, gall, and heart.

The hair was said to breed hair, and a distilled liquor was made thereof, with honey, for the purpose. The sweat, seeing that it exuded from the glands, was good against scrofula. The secundines, calcined, and given in southernwood water, cast out moles and children dead. From the semen was made a magnetic mummy to cause love, and, as Schroeder quaintly puts it, "Paracelsus makes his little man thereof." The blood was drunk hot, as a cure for epilepsy. Applied to nose or skin it stopped hæmorrhages. An oil extracted from it cured consumptions. A balsam was made of it to cure the gout. Dried gently and impregnated with spirit of lemons or vitriol, and made into troches with myrrh, it cured carbuncles.

The brain of a young man under twenty-four, who had died of violence, was taken by the chemist, with all its membranes, arteries, veins, and nerves, and beaten in a mortar; to this was added the water of tile flowers, piony, bettony, black cherries, lavender, lily-convols, until it was covered four inches. After standing awhile it was distilled, and became "a brave antileptick." Salt added to the brain, and the whole distilled in a glass retort in the sand, was used to strengthen the living brain. He tells us, "if we would have more medicines made from man, we should read the particular Tractate of Becker, in Quarto."

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Original Articles.

GONORRHŒA IN WOMEN.

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(*Continued form July 10th.*)

7. The last effect of gonorrhœa in the genitals of women is what I shall term adhesions.

Adhesions from gonorrhœal infection are the most extensive and dense known, because they may exist through so many years. In post-mortems I have worked hours to disentangle adhesions in the pelvis which started from the abdominal ostium of the tube and involved the whole pelvic viscera. In these cases gonorrhœa existed for years, beyond the shadow of a doubt. The dense adhesions, the thick organized connective tissue, and the old exudates on the way to organization, astonish physicians who are not very familiar with autopsial and pathological work.

Does gonorrhœa produce destructive suppuration of the appendages? Sänger, of Leipsic, of known authority, says no. He believes that gonorrhœa of the appendages is entirely a surface disease. He thinks that gonorrhœa only attacks the endosalpinx or peritoneum. Though Dr. Sänger is a well known and well recognized authority in gonorrhœa in females, I cannot agree with this celebrated man. I have now done so many post-mortems and so many laparotomies on women suffering with gonorrhœa, that I must believe my own eyes. I have seen destructive suppuration of the uterine appendages time and time again in autopsies where I had sufficient time to examine, and in many of my own laparotomies for the removal of appendages affected with gonorrhœa I have repeatedly observed destructive suppuration. Of course Dr. Sänger may defend his position by saying that the gonococcus is only a germ that attacks mucous membrane, and when destructive suppuration arises it is due to an extra germ—mixed infection.

But in regard to the extensive adhesions, gynæcologists will learn—some of them have learned—that these terribly strong adhesions frequently make invalids. Often after such old adhesions are removed, the woman will get well. The adhesions produced hypertrophy, which produces reflex irritation and disease. The old adhesions produce compression and atrophy of the nerve periphery, and disease will arise from atrophy of nerve endings. I wish to note that atrophy of the periphery of the nerves of the uterus, rectum, or external genital organs will produce reflexes and disease.

Not all will accept this dictum, but time will tell. I give as one example contracted, cirrhotic ovaries. The history of the nerve periphery is yet to be written. It should be remembered that a nerve centre develops in proportion to a nerve periphery. The disturbances through reflexes due to atrophy of nerve endings will fill a large future chapter in gynæcology. These especial atrophies will be found in the clitoris, cervix, rectum, ovary, and scars.

From the foregoing remarks it will be observed that clinical study, antopsies, and laparotomies demonstrate beyond any reasonable doubt that gonorrhœa is both widespread and destructive in the female. Before concluding this article I wish to make a few remarks on gonorrhœa in the vesiculæ seminales and in the rectum of women. In 1889 and '90 I had made considerable investigations on the semen sacs of man and the lower animals. I found that the semen sacs of the bull and boar were regular in figure and evenly distended, that they all had a natural appearance, and the most important

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point of all was that they all appeared non-pathological. Now my investigations on the cadavers in the Toledo Medical College, while professor of anatomy there, revealed the fact that the vesiculæ seminales were not uniform in outline; the sacs were irregular in form, they had irregular bulgings and sacculations on them; portions were constricted, and parts were dilated. In fact, the semen sacs showed a very distinct pathological condition. In 1890 these appearances led me to further investigations, and I came to the conclusion that the pathology found in the semen sacs was due to gonorrhœa. Later autopsies, with careful microscopical examination of the contents of some of the pathologically appearing sacs, revealed the gonococcus clear and distinct. This, then, I proved beyond doubt: that the semen sacs are attacked by gonorrhœa, just as the fallopian tubes are. Some time later (1891) I met in Birmingham, while a pupil of Mr. Tait, Mr. Jordan Lloyd, who had done much work on the subject, and I was glad to meet a man who had worked at the subject, as I could at that time (1890) find no literature upon it. Mr. Lloyd had independently worked out the idea of gonorrhœa of the semen sacs, as had also his colleague Mr. Marsh. This unexpected circumstance induced me to still further investigate the subject; and now few physicians doubt the existence of spermatocystitis or vesiculitis.

I mention the matter because I think that from the semen sacs arises the danger of the young wife being infected from an old gonorrhœa of the husband. The husband may have had gonorrhœa five years previous to marriage. He may have thought himself well. He would note on occasions when he would take a little excess of drink and indulge in coition several times in quick succession, that a slight discharge would appear at the meatus for some days. This slight discharge was considered insignificant, and it would cease in a week or two. But when marriage came, post-nuptial excesses were indulged in for several months, when the old discharge returned, and did not cease for three to six months. There is no doubt that this was the renewal of the old gonorrhœa. It had been dormant or latent for a few years, especially in the vesiculæ seminales. The violent excesses indulged in after marriage brought forth the old enemy, the clap of bygone years, that was long since supposed to be buried. But its resurrection brought sad infection to the young wife.

Clinical facts are on my side to supply all necessary proof, and I have made many a visit to such young wives. I have watched many a sad contrast where I knew the young man had possessed for years an old gonorrhœa, and he was bound to give it to the wife. It acts on her just about the same as an acute attack derived from a fresh source. The illness of the young wife is very slow and insidious. A diagnosis must be made with caution, and all views of gonorrhœa must be kept quiet in the physician's cranium. A confession of the husband will reduce the strained position of the physician in reference to the disreputable and almost incurable disease. He will then treat the doctor with due patience.

The wife will almost certainly have endometritis and endosalpingitis, and will almost surely abort if she becomes pregnant. The abortion is then generally the beginning of her more serious invalidism.

Gonorrhœa persists in the mucous membrane, and the rectum has a typical mucous membrane—cylindrical epithelium. The idea of gonorrhœa in the rectum is relatively a new one, but after observing the course of the rectal strictures I am more and more convinced that gonorrhœa is the basic cause of stricture in the female rectum. Women have ten times more rectal strictures than men. The gonococcus has an easy way to get into a woman's rectum—and we know that gonorrhœa of the male urethra commonly results in urethral stricture. The gonococci acquire a position in the follicles of Lieberkühn, among the most typical cylindrical epithelium. They lie at the bottom of the follicle, and are not swept out by fæcal currents; and thus they get time and chance to grow. The gonococcus induces desquamation of the epithelium, and inflammation starts in the sub-epithelial tissue, resulting in slow but progressive growth of connective tissue which forms the stricture. I present to the profession the idea of gonorrhœal strictures in rectum of women, because I have seen so many of such strictures with

no other apparent explanation. And why should gonorrhœa produce stricture of the urethra and not of the rectum?

In conclusion I will present some general views in regard to gonorrhœa in females.

1. Gonorrhœa must be made more the subject of study in our colleges. Its extensive pathology should be explained, and its terrible persistence should be fully impressed on the general practitioner, so that he may be able to diagnose the disease, to advise the patient in regard to marriage, and to give rational treatment so that the disease will not be transferred to unnecessary fields.

The teaching of gonorrhœa is at variance with itself; the teachers contradict each other. Thorough and reliable gynæcologists should instruct on gonorrhœa in females. Wider experience and careful study will no doubt confirm the great observations of Dr. Noeggerath.

2. The consequence of gonorrhœa to the individual is very disastrous. It frequently entails years of suffering on himself, and also he may make a life-long invalid of the woman he may marry. The gonorrhœal virus irritates the mucous membranes, and induces a neurotic state from continued reflexes. The reflexes from the female genital organs will be much more disastrous than are those of the male, on account of the more extensive surface in females attacked, and also on account of the greater hypogastric plexus in females. The large periphery of this nerve is very much impressed, and it profoundly affects the whole system of the woman.

3. Adequate instruction should in some way reach the public, so that the disease may be better understood. Gonorrhœa is ten times more disastrous than syphilis. Syphilis is nearly always a curable disease, while gonorrhœa is often incurable. I think assignation houses should be under strict observation of a skilled gynæcologist—especially skilled in the knowledge of gonorrhœa. The licensing of such houses is far more moral than it is to allow young men to blast their future by contracting gonorrhœa from a "chippie on the grass" who is supposed to be innocently free from clap. Humanity will never be perfected all at once, and from what I know of present society it would be better off with well regulated houses where "desires are sold for gain" without the addition of gonococci. The most dominating instinct of any animal race is the sexual instinct, and it must not be wondered at that such a function is exercised. The roaming prostitute may infect twenty men in a single twenty-four hours. It must not be considered as bad principle to license houses of ill-fame. There is no use of attempting to make people do the impossible. It is a matter of common observation that the human race will exercise the functions and instinct of sex, so that common sense dictates that such exercise ought to be practiced under the most favorable circumstances for human good. Now it is commonly asserted that 80 per cent. of men 30 years of age in large cities have gonorrhœa. Will well regulated licensed houses make matters much worse?

Odd forces are heard in all moral progress. The radical preacher wants to tolerate no evil, but to stamp out all at once. The radical temperance reformer tolerates no "drink," but wants even the manufacturing stopped at once. In the fight to open the World's Fair on Sunday, I observed that the Chicago preachers and the Chicago saloon-keepers worked hand-in-hand for Sunday closing. This shows the unreasonableness of over-radical measures. It is useless to try too radical methods, so that we must try modified measures and tolerant views.

Fortunately, the individual who contracts gonorrhœa does not transmit it to his posterity, for it is strictly a local disease.

It is misdiagnosed, because it comes to the physician mainly as a chronic disease. It is a slow, progressive, infectious disease which may persist for years after contraction.

It is entirely unsettled whether a man should marry after contracting gonorrhœa. All we can say is that gonorrhœa is very uncertain as to its exact progress and results in individual cases. But still it is a risky matter for a man to marry who has ever been infected with gonorrhœa. The terrible risk is, unfortunately, assumed by the wife.

The great and wide prevalence of gonorrhœa to-day is not due to any particularly bad tendency of the present race, but to the facility of travel. A man may infect a woman with gonorrhœa in New York to-day, and two days after another in Chicago. The congre-

gating in large cities is favorable to the spreading of gonnorrhœa. The checking of marriage enhances its spread. Wars and emigration spread it. The steamboat and the railway quickly spread it.

It is seldom considered that gonorrhœa gives rise to a class of diseases in women which surpass in importance all other diseases. It constitutes the chief clinical study in gynæcology. The moral consideration of gonorrhœa is a fruitful field for speculation as regards its consequence on the individual or race. The social questions springing out of it call for thinking, when we remember who is to be involved in the results of gonorrhœa. What about the etiquette of gonorrhœa? Will it not make citizens suspicious of their neighbors? It is the chief disease that the gynæcologist deals with. The obstetrician does not escape, for I claim that most sudden deaths at labor and most of the violent puerperal fever immediately following labor are due to the rupture of pathogenic cysts during labor. These cysts arose from previous gonorrhœal infection, *e. g.*, ovarian cysts and tubal cysts. In one series of cases of 548 labors, five died; and four of these were examined post-mortem, and it was found that they died from the rupture of pathogenic cysts at labor. These cysts were due to gonorrhœa. The other patient died suddenly, but, as no autopsy was held, it was not known what she died of. I have lost several women myself from the rupture of cysts due to gonorrhœal infection.

Dr. Lewes, of London, examined post-mortem one hundred women, and found seventeen cases of pyosalpinx, hydrosalpinx, and hæmatosalpinx, chiefly due to gonorrhœa. The gonorrhœal virus passes up the tube to the abdominal end, so that as a matter of fact we find almost all the pathology of gonorrhœa outside of the tube to have started from its abdominal end, and the consequences found by Dr. Lewes are secondary.

It should not be forgotten that the gonorrhœal infection will persist in the vulvo-vaginal glands and in the urethral glands for years, and we can easily observe the red mouths of such glands for years.

The effect of gonorrhœa on the general system is malnutrition. Its primary and final effect is mal-assimilation. It starts as a local irritant, and ends as a neurosis. The evil effect of gonorrhœa is chiefly accomplished by means of the sympathetic nerve. The pathology of gonorrhœa is brought about by reflex action. The periphery of the hypogastric plexus, of the ovarian ends in the mucous membrane reaching from the vulva to the ends of the fallopian tube. The irritation due to the gonorrhœal infection extends over an extensive and exquisitely sensitive area of mucous membrane. The infection irritates the thousands of nerve ends in the endometrium; it irritates constantly all the innumerable nerve endings in the endosalpinx, and besides the peripheral nerves of all the parts of the peritoneum implicated in the gonorrhœal inflammation surrounding the fimbriated ends of the fallopian tube. Again, the great number of nerves that end in the mucous membrane of the urethra, the bladder, also the peripheral apparatus of the vulva, are continually irritated. If the gonorrhœal infection pass into the rectum, then the irritation from the mucous membrane of the gut much enhances reflex irritation. The result of the irritation from the mucous membranes is carried: (1) over the hypogastric plexus to the abdominal brain, where it is reorganized and flashed out on every viscus; (2) it is carried up the spinal cord by way of the third and fourth sacral nerves, and the spinal cord—the greatest reflex organ in the body—is continually irritated. It is a common observation that gonorrhœal patients get very pale and nervous. The visceral rhythm is disturbed, and malnutrition almost always follows.

In the male the logical effects on the system are the same. The stages of gonorrhœa may be summed up in three grand groups during its slow career. The stricture is the stumbling-block to health.

(*a*) We first have obstruction somewhere in the genito-urinary tract from kidney cortex to urethral end.

(*b*) We, secondly, have reflex irritation playing on the sympathetic plexuses, inducing congestion or anæmia in the viscera.

(*c*) We, thirdly, have infection to finish the scene. The man begins "catheter life," which means infection.

But in any case the chief effect of gonorrhœa on the general system is malnutrition from reflexes. The local effect is inflammation, pressure and mechanical obstruction.

My hope is that this article will induce others to make a critical study of gonorrhœa in women.

Treatment of Gonorrhœa.—It would likely be expected that the most extensive and most disastrous disease of women—gonorrhœa—would have some standard therapeutics. So far as medicinal remedies are concerned, to cure by administering by the stomach, we have none. Remedies by the stomach have but very slight effect on gonorrhœa. The balsam of copaiba may slightly affect the gonococcus in the bladder and ureter; but gonorrhœa is a local disease, and can only be effectually treated as such.

The first attention should be given to the vulvar glands. When the vulvar glands are affected, one must get to the bottom of them. Skene's glands should be laid open, and carbolic acid or nitrate of silver applied to the whole tract. A 10-per-cent. $AgNO_3$ solution is very effective in the gland tracts. The other smaller vulvar glands can be scraped out. The vulvo-vaginal glands must be laid open or extirpated.

Remember that the ducts and glands of the vulva will remain inflamed for years from gonorrhœa, and nothing but radical measures cure.

The great danger from the infection getting into the urethra is that it will or may result in cystitis, ureteritis, and nephritis. The kidneys are in danger of infection when once the bladder is invaded. The bladder should be washed out with boracic acid, 15 grains to the pint, and occasionally it might be washed out with $AgNO_3$, 5-per-cent. solution. But our remedies to cure gonorrhœal cystitis are very uncertain.

Now, the vaginitis, which I am sure is quite rare, could be radically treated by swabbing out the vagina with carbolic acid 20-per-cent, or let 10-per-cent. $AgNO_3$ solution be poured through a speculum into the vagina. $AgNO_3$ is a chemical agent which seems to cripple the gonococcus.

If the gonorrhœa gets into the uterus, the only way to treat it effectually is to dilate and thoroughly curette its cavity, then apply pure carbolic acid to the interior on a piece of gauze wrapped on a sound. After applying the carbolic acid, the uterine cavity should be well packed, so as to secure drainage, for a few days to a week.

When gonorrhœa gets into the fallopian tubes and produces pus, extirpation is the only resort that cures. In fact, when a *young* woman has gonorrhœa in the fallopian tubes, she is better off without her tubes. My experience is that tubal gonorrhœa is almost an incurable disease, except by removing the appendages. Of course, I am fully aware that some tubal gonorrhœa does not disable the patient from labor, as it varies in virulence, like syphilis or pneumonia. But the general rule, I think, holds good, that tubal gonorrhœa is best cured by tubal extirpation. After the tubes are removed with the ovaries, the endometrium will atrophy from ligation of the ovarian artery, and thus the soil for the gonococcus in the uterus will disappear, and with it will go the gonococcus.

I have sometimes observed persons on whom gonorrhœa had scarcely any perceptible effect. But such persons are exceptions, like those who are naturally protected against severe or even slight attacks of smallpox, scarlet fever, or diphtheria.

Large vaginal douches are absolutely necessary for cleanliness, and also no doubt the stream of water washes away innumerable gonococci.

The treatment of gonorrhœa in woman is nearly always during the chronic stage, and the only remedies of use are radical germicides, which cure by local action, or the appendages must be removed.

Much skill, experience, and careful observation are required to diagnose many old and chronic cases of clap. Experience and observation have thoroughly convinced me that a most reliable landmark is the vulvo-vaginal glands. *First*, they have red mouths; *second*, one can squeeze out of their ducts a fluid, in consistence all the way from serum to virulent yellow pus.

It is my opinion, founded on much contact with medical men, that numerous cases of gonorrhœa, both acute and chronic, are frequently overlooked in woman. Many a mistaken diagnosis is made in regard to gonorrhœa in the female.

To sum up the treatment of gonorrhœa, we may say:

1. Gonorrhœa *may* be cured if it be taken early enough so that the germs are not beyond control of local application.

2. The microbes must be radical germicides applied directly to the habitat of the gonococcus.

3. When gonorrhœa gets into the fallopian tubes, it is an incurable disease except by extirpation of the appendages.

4. Probably the best internal remedy in gonorrhœa is the balsam of copaiba. The urine secreted while taking copaiba seems to act on the gonococcus and cripple its multiplication.

For a local remedy, $AgNO_3$ solution of 10 per cent. is probably one of the most effective, while at the same time it is not destructive to surrounding tissue.

SPINAL CONCUSSION.*

BY C. H. WILKINSON, M.D.†

In presenting this subject, I am fully conscious that it is one which is yet undergoing evolution in the minds of our professional brethren, and therefore one which might be termed too immature to be offered to a convention composed of gentlemen who are accustomed to deal with old and established pathologies, with actual and not chimerical conditions of disease and health.

I am well aware that hitherto this field has been regarded as the common property of anyone who chose to invade it—the surgeon, the alienist, and the general practitioner of medicine enjoying its domain together. Nor am I unmindful of the fact that a multitude of conflicting opinions are entertained, not only upon the nature but even upon the actual existence of this condition of the human system. From the fact that spinal concussion is becoming more prominent in the minds of our profession every day, and that at almost any moment our physicians might be called upon to consider it from a legal as well as from a medical standpoint, and for the further purpose of considering its semeiology and nature, and to dissever it from other morbid conditions of the spine erroneously classified under the heading of this disease, am I induced to place this subject before you at the present meeting.

By concussion of the spine I do not wish to include the many different pathological conditions which this portion of the body may be subjected to through the agency of traumatism, but only that morbid state of the nervous system following an injury to the back, unattended by a visible lesion, and undemonstrable except through the agency of subjective symptoms. To be more precise, I propose to present that condition improperly designated "railway spine," or concussion of the vertebral column following railway accidents.

It is well to understand in the beginning, that there is nothing special in the nature of a railway concussion of the spine, except perhaps, as we may see further on, in its remote possibilities.

A person falling from a scaffold, or into the hold of a ship, may suffer from the very same effects as one does who may have been injured in a railway wreck. Each might be stunned at the moment of the accident, and develop the very same train of symptoms in the course of a few weeks afterwards; but it would be absurd to call one a case of scaffold or ship-hold, and the other a case of railway, spine. Yet this latter term is so often applied to railway injuries as to suggest the belief that there is not only something special, but even something very intractable, in the nature of such injuries. Erichsen himself, the father of the expression, distinctly states that there is nothing special in the nature of such concussions, but it is to the great momentum of a moving train of cars coming suddenly to a stop that the peculiar severity of such cases is attributable. Now, if there could be a more sudden arrest of momentum, or a greater shock to the spine, than that experienced by a person falling through an open hatchway, a distance of twenty or more feet, and alighting on his back, then the writer fails to appreciate it. Yet the latter accidents often occur here in Galveston, and are as a rule unattended by any inflammatory or psychical reaction, while

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the victim of a railway accident, though he may have received no physical injury whatever, immediately or soon afterwards becomes an invalid for months or even years.

Any severe injury to the back may occasion fracture or dislocation of one or more bones of the vertebral column, or a rupture of a blood-vessel may occur in the cavity of the spinal canal as a result of such injury, each lesion producing pressure upon the cord, with inflammatory and paralytic symptoms following; or there might be simply bruising of the muscles of the back, or a wrenching of the ligaments holding the vertebræ together (spinal sprain). All of these conditions, however, are demonstrable lesions of the parts affected, and should never be classified as illustrative of concussion of the spine.

True, concussion might, and probably would, coexist with the foregoing injuries, but, being an entirely different affair, should never be confounded with such lesions. It is eminently proper to limit the definition of concussion of the spine to be the shock, thrill, stun, or impulse, communicated to the spinal marrow in falls or other injuries.

Bastian's description of spinal shock is so clear, concise, and appropriate to the subject under consideration, that I will quote his few line in confirmation of the point I herein maintain. Says he:* "In the majority of such cases, no complete paralysis is induced, even at first. There may at most be paresis of one or more limbs, general prostration, nausea with occasional vomiting, a rapid and possibly irregular pulse, with ocasional startings and twitchings of the limbs, whose sensibility may be diminished, exalted, or unaffected. The temperature may probably be at first depressed as a result of shock, though subsequently a febrile elevation may continue for some days. In regard to micturition, there may either be some delay or difficulty or an irritability of the bladder. With this there is general restlessness, nervousness, and insomnia. In some cases even without any appreciable lesion the shock to the system may be more profound, and there may be paralysis of limb lasting perhaps for some days and then rather suddenly disappearing."

*H. C. Bastian, in Quain's Dictionary, vol. ii.

From the foregoing, therefore, it would appear that concussion is a transient affair, a temporary stun or commotion imparted to the spinal marrow (as in fact it really is), and that in a few days at most it is over or else followed by its diseased consequences. But you will say it is a well known fact that often, in a case of railway accident, there is a train of morbid symptoms set up weeks or even months after the reception of an injury, "such symptoms being clearly undemonstrable, but nevertheless indicative of an actual disease." To such a statement I will reply by saying that such indeed is the case, and that this condition is exactly the disease I am here describing; at the same time there are symptoms of injury clearly associated with lesions that are demonstrable, such as meningitis, etc.; while in a third class there are cases which present a classical array of all the subjectives mentioned by Erichsen himself, and which are nevertheless founded upon no disease whatever. I propose to include the former class just alluded to, and, excluding fractures, dislocations, hæmorrhages, sprains, contusions, and the like, will proceed to enumerate those symptoms which belong to shock. And in doing this I will quote Mr. Erichsen, since he is looked upon as the standard authority in such diseases; at the same time I take exceptions to his manner of commingling symptoms which belong to concussion with those which appertain to other disorders of the spine.

In offering the following symptoms, I do not yield the position assumed that concussion is of short duration, and unless speedily fatal is entirely over in the course of a few days at most, but I follow the author in his conglomeration of shock and its remote consequences under the one heading, simply for the sake of convenience and because it is fashionable to do so.

Symptomatology.— "After the immediate effects of the accident have passed away," says Erichsen, "there is a period of comparative ease and remission of the symptoms, during which the patient imagines that he will speedily recover his health and strength. This period may last several weeks, possibly for two or three months. It will be found, however, that during this period the patient has never enjoyed an interval of complete

health. He has lost bodily energy, mental capacity and business aptitude. He looks ill and worn, often becomes irritable and easily fatigued. After a lapse of several months, from three to six, the patient will find that he is steadily becoming worse. The countenance becomes pallid, sometimes livid, and has a careworn expression. His thoughts are confused; he cannot concentrate his ideas nor connect his reasoning. His sleep is disturbed, restless, and broken. Unnatural noises, buzzing, ringing, etc, are felt in his head, while vision, hearing, taste, and smell become defective. The sense of touch deteriorates, and the patient is unable to pick up small objects when directed to do so. The attitude becomes stiff and unbending; the patient holds himself erect and usually walks straight forward, as though afraid to bend or turn his body. There is complaint of pain on moving the head, especially on rotating it; in fact, almost any bodily movement occasions pain, so that he moves around as little as possible. Upon examination the spine will be found tender in many places, so that a slight pressure will become unbearable, and on this account he will be unable to stoop down to pick up any object from the floor without dropping on one or both knees in order to do so. The gait, especially, is peculiar, the patient walking unsteadily, usually employing a stick to help him, and keeping his feet apart in order to steady himself. There is also difficulty in going up or down stairs; nor can he walk any great distance (as half a mile) without a rest. The sensation as if a cord was tied around his waist is often felt, and spasms of the diaphragm are sometimes very distressing. The nervous power of the limbs will be found defective, often unequally so, and both motion and sensation will be found impaired, while numbness or hot and cold flushes will be experienced on one or both extremities. The body generally loses weight, though the muscles may apparently retain their normal size and shape. The functions of the genito-urinary apparatus rarely become deranged, though the sexual appetite is invariably lessened. The pulse in the beginning is usually slow, but in an advanced stage it ranges from 90 to 100."

Such, then, is a brief *résumé* of the usual symptoms found in spinal concussion, as detailed by Erichsen. But it is clear to me that this author has blended symptoms which belong to meningitis, myelitis, etc., with those which pertain to shock. The girdle and spastic signs just related are well known evidences of morbid changes in the marrow and its membranes, and should be charged to those diseases, while the "subjectives" he first mentions should be assigned to the disorder under consideration.

Pathology.—The nature of spinal concussion is less easily described than its semeiology, and upon this point authorities appear to be at sea. Leaving out the consideration of the grosser lesions of the spine from accidents, such as myelitis, meningitis, hæmorrhages, and the like, we have left only the purely psychological and pathologically undemonstrable conditions to deal with. Such are spinal concussion and traumatic hysteria, both of which, though based on on injury, correctly speaking, should be eliminated from the field of surgery and relegated to the province of general medicine, where they belong.

Seguin briefly but succinctly describes this malady in the "Annals" for 1891. Says he: "Whilst the majority of such cases result from violent shock received by victims of railway accidents, it is equally true that there is nothing specific in such accidents, and that the same train of symptoms may be produced by any accident causing shock and fright combined. The reader who has had much experience in neurological practice, will recognize an astonishing similarity if not identity with a large group of non-traumatic cases which annoy the physician so much by their vagueness, their subjectivity, and their incurability. We acknowledge that we do not understand the pathology of such cases, which we classify as hypochondriacal, hysterical, or even delusional."

Clevenger in his monograph advances the idea that the pathology of spinal concussion is to be found in a definite lesion of the prevertebral sympathetic ganglia of nerves. His reasoning to this effect is very ingenious, and he urges that in future, should opportunities present themselves for autopsies upon such cases, those ganglia should be

dissected out, and their morbid anatomy carefully studied.*

Oppenheim, who formerly believed in Erichsen's meningo-myelitic theory of such cases, now declares that the brain is the organ impressed, and that we have a traumatic hysteria in all cases of spinal concussion. In my opinion, all evidence points to a disorder of the sympathetic nervous system in all uncomplicated cases. Of course, actual inflammatory conditions of the cord and its membranes may coexist with concussion, and we may have the huge array of both physical and psychical symptoms described by the great English surgeon. But the former set are not to be entertained in the consideration of concussion, and should be assigned to treatises on surgery, where *they* belong.

Seguin acknowledges that he knows little or nothing of the pathology of this condition. Oppenheim considers it traumatic hysteria; Hammond, spinal anæmia; while Osler, in his recent work on Practice, considers it an illustration of nervous asthenia.

I believe that Clevenger is right in his idea that the sympathetic ganglia are involved in spinal concussion. But I do not admit that such impression is produced by an inflammatory encroachment on them from the spinal ligaments, marrow and nerves, or meninges. While the sympathetic system is as yet only partially explored, and its functions but imperfectly understood, we all know that powerful impressions can be made upon the human body under its excitation. Suggestion alone, whether auto or otherwise, is sufficient to flush or blanch the face, increase the action of the heart, check or augment the functions of the glands—aye, even raise the temperature of the body.

Now, these phenomena are often observed in a chronic degree in spinal concussion (or rather in its effects), so that it would require but a little further reasoning to establish concussion to be an impression made upon the sympathetic system of nerves by some painful or powerful agency, the memory of which along with the suggestions of others not only continuing its existence but actually increasing its severity. From the fact that no definite pathology has ever been discovered in persons dying after concussion, and from the further fact that a majority so speedily recover after an award for damages, it follows that there could have been no other derangement of the system than one of a purely nervous, functional, or temporary nature. Hence my conclusions concerning the sympathetic nature of the disease. But how does the sympathetic system become involved in spinal injuries, and how is it affected?

To such interrogatories I will state that clearly through the perceptive centres of the brain, and through them alone, does the nerve receive its shock, and the result of this impression is the induction of a state of partial paralysis or paresis of the entire sympathetic system. That the ingress of such impression is through the sensorium, is evident from the fact that persons asleep or even intoxicated at the time of accidents are rarely ever the victims of uncomplicated spinal concussion. Nor are children, as a rule, so affected; while those who sustain marked physical injury to other portions of the body are nearly always exempt from "railway spine."

The reason of all this is obvious. In the first set of cases, sleep and alcohol interpose a barrier to fright, which is always the great disturbing element in such cases; children are often incapable of realizing the danger of a situation which would turn the hair of their parents gray at its encounter; while he with the fractured limb has all his thoughts so riveted to his painful member as to be oblivious to his overshocked nerves. Thus would it appear that Oppenheim's "railway brain" was a truer pathological assignment than Erichsen's "railway spine" for such disorder. The sympathetic system brought into a state of paresis through the action of fright, is easily maintained in such condition through the agency of suggestion—especially, too, if there be associated with it, as there usually is, sprain or soreness of the muscles of the back. Thus, the memory of the accident is so frequently stimulated, and the direful consequences of the injury so often alluded to, that in a short time a perfect state of hypochondriasis is induced, which, if allowed to become fully established, is frequently very difficult to cure.

*Clevenger, page 319.

Clevenger is correct, indeed, when he asserts the sympathetic nature of spinal concussion, but he is eminently wrong when he associates that nature with an inflammatory cause. The avenue through which this system is invaded is the brain; and thus it is that pecuniary aid for personal damages so often cures our patients. It is simply absurd to state that money cures a meningitis, or official position heals an inflamed nerve.

That spinal concussion, psychical as it may be, is an actual disease, is also a fact beyond dispute, although produced by sensorial causes and unattended by a single demonstrable lesion. I know a lady in this city who has been demented for the past thirty years at the sudden loss of her husband, and no doubt hundreds of such cases could be collated were the investigation made upon the subject.

Prognosis.—As regards the prognosis of uncomplicated cases of spinal concussion, it would be safe to assert that, if left alone with a continuance of their psychological influences weighing down upon them, such as self-centred morbid thoughts and suggestions, or the depressing forebodings of friends and advisers, then a protracted and unvarying train of asthenic symptoms would be sure to continue, which might last indefinitely. If, on the other hand, such influences as just cited could be diverted or removed altogether, and a proper system of hygiene and exercise be substituted, most of such patients would be in a short time restored to health.

This question of prognosis is one of great importance to the medical practitioner, for it is a well known fact that most of such cases drift into court, and upon this question of duration of injury does the matter of thousands of dollars depend. Hence the physician should weigh well every circumstance connected with a patient of this sort under his observation, and, while he should appreciate every phase of his melodramatic case, in court he should always bear in mind that facts real and absolute are what he is called upon to testify to. Furthermore, he should bear in mind that a great majority of all such patients recover health after settlement of their cases, in spite of the array of doleful symptoms which predominated pending such settlement.

It is my opinion, and I think that facts bear me out in the same, that traumatic psychoses are much oftener recovered from than those of non-traumatic origin.

Taking, therefore, all such cases as they occur, it would be safe to say that unless some demonstrable lesion of the spine existed (which would, of course, imply some other disease), nine-tenths of the cases of spinal concussion would either entirely recover health or be vastly improved if subjected to proper treatment instead of being trained for litigation.

Treatment.—The treatment of spinal concussion is divisible into two stages, viz., that for the primary shock to the system, and latterly, should neuroses follow, to these remote consequences.

In carrying out the measures to be pursued, two cardinal principles are ever to be borne in mind by the practitioner: (1) that absolute physical rest in the early stage, and (2) mental diversion and physical exercise in the subsequent stage, are essential to the cure of spinal concussion.

A patient who has just received an injury to his spine, be it trivial or severe, should be placed in bed, and retained there until every vestige of such injury has passed away. It matters not that your patient insists on going around, asserting that he feels the better for the exercise. Such indulgence, if permitted, would probably eventuate in some form of inflammatory reaction at no distant date, and in itself would prove the most potent cause, in predisposed subjects, to what most authors denominate the "railway spine." If no evidence of any grosser lesion exist, then a systematic course of spinal friction of rubbing should be instituted.

Rarely will dry cupping be necessary at any time, but stimulating liniments will prove to be of the highest value by regulating the spinal circulation, and, better still, by dissipating the muscular spasm and soreness which nearly always accompany such accidents. Sleeplessness, which often attends injuries to the spine, will be best relieved by moderate doses of sulphonal; while morphine should be used if pain persists in spite of the foregoing remedies.

During the convalescence from this stage, care should be taken that all the secretions are being properly maintained, and especial effort on the part of the physician should be made to encourage the patient in the idea that he is getting well.

In the great majority of cases where the foregoing plan of treatment is adopted, our patients will be able to resume their usual avocations actually cured. But stress must be laid upon the matter of physical and mental quietude during the primary stage, for, without these, secondary psychoses will invariably follow. Cheer your patients as much as possible, and give them to understand that the muscular pains so common in all forms of injury are temporary and not necessarily serious.

Not infrequently cantharidal applications will prove most efficacious in removing those tender spots which so much annoy our cases. I often use them repeatedly over the same muscular spaces, and have never known a case which was not materially relieved of pains by their employment.

This briefly embraces about all necessary to be used in cases of primary concussion of the spine. Where a shock is very severe, of course, stimulants cautiously administered, both internally and otherwise, should be employed. However, as a rule, treatment in this stage will be found more often precautionary against the remote nervous phenomena which so often proceed from the original injury, than against any dangerous condition existing at that time.

When called upon to treat a person who has on some remote occasion received an injury to the spine, the physician's first duty should be to ascertain whether any inflammatory disease exists or not.

Differentiation is an all-important matter in such cases, for so easily can a counterfeit be imposed upon us for a genuine article that not infrequently a good physician will be deceived in listening to the narrative of his patient. To determine this point of inflammatory nature, a thorough and systematic examination of the case should be made. The patient should be directed to expose the muscles of both upper and lower extremities, and especially those along the spine. Find the tender spots, for there will always be several of them, and carefully mark them out for future reference. Provide yourself with a reliable double-acting battery or one of each variety, and test the muscles dependent on that portion of the spine supposed to be diseased. Note the response these muscles give to such electrical irritation, and mark well the reflexes of the lower tendons. The method of directing such examinations is clearly described in Ranney's work on Nervous Diseases, which is herein referred to as a most excellent authority upon such subjects.

Should the physical or objective symptoms correspond or harmonize with the subjectives, then are we in a condition to pronounce in favor of an inflammatory disease, such as myelitis, meningitis, and the like. If, on the other hand, we find muscular reaction and the tendon reflexes in a normal condition, then we are certain that we have to deal with a non-inflammatory subject.

Here the physician's tact and judgment will be largely drawn upon. He has now to decide upon a true psychosis or a feigned disease. Generally a malingerer appear in better physical condition than the genuine sufferer. There is usually a lack of sincerity in his statements, and especially a lack of ingenuousness in his communications to his examiner. The reticence and lack of candor on the part of the malingerer are very significant, and imply that he is fearful of detection if he says too much; whereas the true sufferer is often too apt to bore us with an array of symptoms, and a degree of severity and earnestness, which carry the stamp of sincerity upon their face. In the afflicted the pulse is usually denotive of a run-down system, while in the malingerer the circulation is generally normal.

In the treatment of this secondary stage but little medicine, if any, will be needed to be given. In lieu thereof I would suggest the "diversion plan"—by which I mean that system which has for its object the diversion of the patient's attention from his actual or supposed disease. Moderate, and if he can stand it a full amount of, physical exercise, such as walking, riding, and the like, should be enjoyed.

Usually some light work, where the patient's mind and body can be kept in regular

and constant exercise, will be found most beneficial, especially if such employment brings him some pecuniary revenue, even though very moderate.

All books and papers, and in fact all suggestions, relating to such accidents, should be strenuously avoided by the patient, who should be encouraged in the belief that he will eventually regain his health. Should an internal tonic be deemed advisable, I know of nothing more applicable than some of the malt extracts to be found in the drug stores. The small per cent. of alcohol contained in them will stimulate digestion and aid in building up the strength.

Brown-Séquard's Pil Neuralgica has acted like a charm in a few cases upon whom I tried this remedy of late. Not only were these patients relieved of their vague pains, so common in this disease, but the pulse usually rapid was brought immediately into healthy action by its employment. I would not hesitate to use the Séquard pill in similar cases in the future.

I have no faith in liniments for this stage, but should fixed pains about the limbs or body be complained of, then "flying blisters" are the remedy on which you can confidently rely to do prompt and excellent service. These will hardly be needed, however, if my diversion plan is properly carried out, since this, better than all others, tends to restore that self-confidence which is invariably lost in most cases of spinal concusion.

CONCLUSIONS.

In concluding, I will briefly epitomize the main features which I have sought to establish in this paper.

1. In reality, spinal concussion is a temporary condition and ordinarily of brief duration, lasting a few hours, or days at most.

2. Authors have erroneously considered under this heading many of its consequences, such as the psychoses and secondary inflammation of the cord and its membranes.

3. For the sake of convenience only, and in order to be in fashion, I have included under "concussion" the primary shock as well as the subsequent sequences after spinal injuries.

4. Spinal concussion, as thus considered, has no demonstrable pathology attached to it, and all secondary inflammations should be designated as myelitic or some variety of meningeal inflammation, and should be treated as such.

5. In this disease the injury is thrust upon the sympathetic system of nerves, through the perceptive centres of the brain, and not through any inflammatory process of the cord; so that persons asleep or intoxicated at the time of an accident, and those whose attention is riveted upon some grossly injured member of the body, are always the lightest sufferers after such accidents.

6. In its nature, spinal concussion is a true hypochondriasis, and is kept alive by morbid suggestions and evil forebodings from self and others, as well as perpetuated by a lack of self-confidence and a neglect of proper exercise, both physical and mental.

7. Being a disease with few if any objective symptoms, it is often the avenue adopted by malingerers to claim pecuniary reward for home-manufactured injuries.

8. Absolute rest after injury, and mental diversion with light bodily exercise (especially remunerative exercise) in the secondary stages, are the best means known for averting chronicity and warding off incurableness in spinal concussion.

9 Where the foregoing methods are properly carried out, the prognosis in this disorder, both as to life and future usefulness, will be very good.

NOTES ON SCARLET FEVER,

BY W. W. TOMPKINS, M.D.

Scarlet fever, on account of its frequency in childhood, is to be carefully looked after, and when recognized to be at once isolated, to keep it from spreading and to give the case the best chance to recover.

Some hold that scarlet fever, measles, and rötheln are one and the same disease. This occasions much confusion, promulgates a false doctrine, and establishes a security which is false and disastrous.

When scarlet fever becomes epidemic, it does not seem to claim as many victims as does measles. The larger proportion of those who take it are children up to ten years of age. If a patient is properly isolated

in a house, the other inmates often escape, whereas with measles this is not so likely to be the case.

Physicians are in a very large measure responsible for its propagation. Some of them, in order not to offend, call it scarlatina and say it is not to be dreaded. They in this way pacify and gratify the parents, but incur the censure and hatred of those who contract it from the so-called cases of scarlatina. As scarlet fever and scarlatina are one and the same disease, one should not use the latter term, for it gives a feeling of security to many which leads them to neglect precautions for preventing its spread. The same poison excites the symptoms, and the case is best described as mild or severe scarlet fever. The neighbors are warned, and if they are sensible they keep away from it and thus avoid being carriers of it.

For the detection of this disease, clinical observation is of course better than any description. To see it, and keep the picture in the mind, will assist in its recognition and its differentiation from other similar troubles. Its being confounded with measles, as often occurs, has a bad moral effect, to say nothing of the effect of the treatment.

The mortality varies greatly in different epidemics, as does the success of treatment in the hands of different physicians.

If a child is taken sick in school, it should be sent home and a physician called, instead of being treated by the teacher, who attributes its vomiting, headache, and rise of temperature to indigestion or biliousness.

I will give a few examples of cases I have seen in consultation where want of care on the part of the attendant occasioned great trouble:

Case 1.—Two families occupied the same house. The one living on the second floor had a nine-year-old boy, while on the lower floor were two children, a boy and girl, aged five and two years. The five-year-old boy on the lower floor took a mild form of the disease; he was not confined to the room below, but was allowed to go upstairs and play with the boy living there. A few days after the child had peeled, the boy on the upper floor took the disease. It was malignant from the start, and in a few days he was dead. The little two-year-old escaped for six weeks, at the end of which time she took the disease; it was very mild, and in a few days she was apparently well.

A kind neighbor who resided near visited them to see if it was really scarlet fever. She was the mother of seven children, aged thirteen to one year old, who all slept in the same room. Two of her children contracted the disease; the other five escaped. One of the children had the malignant form, was very ill, but recovered; the other one was scarcely sick, and could be kept in the house but would not go to bed.

Here the entire trouble resulted from want of firmness on the part of the physician and parents in not keeping the children apart, in the one case, and declining any officious interference on the part of the neighbors.

Case 2.—A short time since I was asked by the father and mother of a seven-year-old girl to please meet them at their home at 5 P.M., as their child was expected to reach home at that hour.

This is the history: They had three children, aged seven, five, and three years. The five-year-old one took the disease, and died the second day; the three-year-old was sick at the same time, but lived one day longer. The seven-year-old child had been in the room with the other children more or less until after their death and burial. At the end of a week the father was telegraphed that this child was sick; but instead of going to the child, as requested, he had her sent to him. She rode a distance of 60 miles in a railroad coach filled with men, women, and children, although the characteristic eruption was present and she had high fever and vomiting. A gentleman who placed his wife and two children in this same coach, in twelve days brought one child back a corpse and the other dangerously ill with the disease.

This shows the danger of travel, and that we often contract a disease by direct contagion without knowing it. This seven-year-old child was permitted to play with her little brother and sister during their sickness, and then sent away 60 miles to avoid taking the disease. Could anything be more absurd?

Case 3.—I saw two children that had died of scarlet fever. The parents had been assured it was very mild; that the throat

trouble was the most natural thing in the world, occurring as it did with the eruption; that it was to be looked for, and need not occasion any alarm. These two children were both dead in six hours after this comforting assurance; and three of the other children were down with the disease, but subsequently recovered.

Case 4.—I recall a family in which two children were dead in the house. A third child was brought home to attend the burial, and, through weakness on the part of the physician, this little innocent was permitted to go in and kiss the two dead children. From this contact it contracted the disease, and in two weeks was dead.

Case 5.—I saw three children with scarlatinal nephritis, all bloated, pale and waxy-looking, with a large amount of albumin in their urine; with shortness of breath, and all those symptoms which are recognized in this condition. The physician who treated them stated that when they were sick the symptoms were mild and there was but little desquamation, and that he had his doubts about what it was. During the period of desquamation he permitted them to spend a day in trapping snow-birds. From this exposure dated the nephritis, and two of them came near losing their lives.

Case 6.—I treated a girl 11 years of age; her disease was quite mild as regards subjective symptoms, but she peeled well. I kept her in the house for a month. At the end of that time she asked permission to go in the carriage to the depot to meet her sister. A shower came up; she was dampened from it, and as a consequence she had a nephritis, from which she barely escaped with her life.

The mere fact that some children can disregard all care of themselves and suffer the most irrational medication, and survive, should in no wise cause us to be careless, or in any way to relax our efforts to make the disease as mild as possible.

Scarlet fever is scarlet fever. A given case being mild gives no assurance that it will produce a mild attack in others. If we can get the children past ten years of age without the disease, it is probable they will never have it. Of course cases do occur at any and all ages, but is is not often found after ten years.

Considering the fearful sequelæ of scarlet fever, if by prudence we can prevent it we can congratulate ourselves on being the instruments in saving people from much discomfort and deformity. No pains should ever be neglected to isolate a case and confine it so as to prevent its spreading.

Charleston, W. Va., June 16, 1893.

CLINICAL NOTES.

Succinate of Iron in Jaundice.—Dr. J. D. Wilson, London, Ont., writes: I have just succeeded in relieving a case of obstructive jaundice, due to impaction of gall stones, with succinate of iron (P., D. & Co.'s). The patient took one teaspoonful three times a day for ten days. At the end of that time the bladder was empty. Prior to this I tried all the usual remedies for seven months without avail, and had concluded that an operation was the only chance of relief. I am now treating my second case of obstruction with succinate of iron, and I feel quite hopeful to have the same result.

Normal Ergot in Hæmorrhoids.—Dr. J. W. Bailey, of Gainesville, Ga., states that in non-bleeding hæmorrhoids the anal injection of normal liquid ergot (P., D. & Co.) has, in his practice, many times cheated the surgeon's knife out of an operation. Of course this medication is not undertaken in the severest cases, where great protrusion of the hæmorrhoids demands surgical treatment.

Wild Yam for Horses.—Dr. Boswell, of Talladega, Ala., says: I have found fluid extract wild yam (P., D. & Co.) one of the finest things in the world to treat colic in horses, giving 1 to 2 tablespoonfuls at a time. It will relieve a horse with colic almost invariably, and is in my veterinary practice a standard remedy.

Mosquera Beef Jelly in Gastric Irritability.—Dr. J. Lampton Price, Frankfort, Ky., writes: I have a patient who cannot retain any food upon her stomach except some preparation of this sort (Mosquera's Beef Jelly), and this seems to suit the case better than anything else.

Correspondence.

DIABETIN IN DIABETES MELLITUS.

A very exhaustive report on the great value of Diabetin was incorporated in a paper on Diabetes Mellitus, read by Privy Councillor Professor Dr. Leyden, of Berlin University, at the Fifteenth Congress of the Berlin Balneological Society, held March 10, 1893.

The paper is published in full in the Deutsche Med. Zeitung, June 5th and 8th, Nos. 45 and 46, and we give its salient points below.

Dr. Leyden referred to the various experiments which had been made twenty years ago at his clinic (then in Strassburg) with inulin and levulose, by one of his students, Dr. Komanos. It was shown at that time that the excretion of sugar was diminished when diabetic patients were given these particular forms of sugar. At that time levulose was very high-priced. Since then the price has been considerably reduced by the Schering process, and therefore Prof. Leyden in 1891 and 1892 again took up these experiments.

Dr. G. Klemperer, his assistant, was able to prove, in the case of two diabetic patients, that the exhibition of from 25 to 60 grammes (1 to 2 ounces) of levulose daily for a short period of time, does not increase the sugar of patients suffering from the grave form of diabetes.

The next experiments were made in the woman's department of the clinic by Dr. Heyse, Staff Surgeon to the German Army.

The daily amount of carbohydrates taken by the first patient was 170 to 180 grammes (about 6 ounces); during some periods 50 grammes (1⅔ ounces) of levulose was substituted for the same quantity of cane-sugar. The proportion of sugar in the urine compared to the quantity of carbohydrates taken was found to be: For levulose (average of twenty-four experimental days) = 3.9 : 100; for cane-sugar (average of fourteen experimental days) = 6.6 : 100. The difference in favor of levulose, therefore, amounted to 2.7 per cent.

For the second patient the same relation was found to be: For levulose (average of eleven experimental days) = 27.5 : 100; for cane-sugar (average of twelve experimental days) = 31.9 : 100. The difference in favor of levulose amounted to 4.4 per cent.

The sugar was estimated in the urine by polarization, titration with Fehling's solution and with Einhorn's fermentation tube, all the methods giving corresponding results.

A most remarkable fact, observed in connection with this case, is that during the exhibition of levulose the amount of sugar in the urine decreased from day to day during the experimental period, so that the oxidation of the carbohydrates increased constantly, showing an adaptation to the system, while just the reverse was true for cane-sugar, the daily amount of sugar in the urine increasing during that experimental period.

The result of these therapeutical trials (which are illustrated by diagrammatic curves) is a very valuable one. It is shown thereby that levulose is put to much better use by diabetic patients, and less of it is excreted by the urine, than of cane-sugar, which also includes the sugar formed in the system from the carbohydrates of the food. Although none of the above cases were of a very grave character, two at least must be considered as quite serious ones.

A portion of the levulose was excreted as dextrose without having been put to any use, but this was much less than with ordinary sugar. An amount, more or less considerable, was certainly consumed and put to use in the organism.

These results certainly should encourage us to make use of levulose in the treatment of diabetic patients, for the reason that, if a moderate amount of this form of sugar is partaken of, say 50 grammes or a little more (nearly 2 ounces) per day, a much larger portion of it is consumed by the system, while only an inconsiderable portion is again excreted with the urine.

Prof. Leyden, in continuing, dwells upon the fact that the so-called symptomatic treatment of diabetes is deceptive, in so far as the intention of the physician is only directed towards diminishing or abolishing the excretion of sugar in the urine by totally withholding sugar and sugar-forming food from the patient. While it cannot be denied that the unconsumed sugar circulating in the blood has a pernicious influence on all the various

tissues of the body, we must take into consideration the fact that in withholding all the food mentioned we actually starve our patient. Sugar and sugar-forming food constitute more than half of the nourishment a healthy person needs. When we feed a diabetic patient on fat and albuminoid food only, we therefore force him to live on his own bone and flesh, from which the system is forced to draw for its needed supply of carbohydrates. It is well known that pure meat-diet carries with it the great danger of inducing diabetic coma, and it is therefore the imperative duty of the physician to furnish his patient with a moderate amount of sugar and sugar-forming food. At the same time, in order to provide for an ample excretion of the circulating sugar, Prof. Leyden suggests to encourage the patient to imbibe a sufficient quantity of liquids.

Prof. Leyden maintains *that the prime indication is to feed diabetic patients well, in order to prevent progressive emaciation.*

The excellent advice which he gives in this respect, as the quantity and quality of the food to be prescribed, it would lead too far to detail here. But in the light of the fundamental principle thus laid down by this great clinician, it is evident of what great value levulose (Diabetin) must be in diabetes, since sugar and sugar-forming food must be partaken of to a certan extent by these patients.

The name of Diabetin was given to this levulose by E. Schering because its main therapeutic use is that of a substitute for cane-sugar in the regimen of patients suffering from diabetes.

SCHERING & GLATZ.

MEETING OF THE MASSACHUSETTS MEDICAL ASSOCIATION.

The annual meeting of the Massachusetts Medical Association was held in Boston on June 13th and 14th. During the two days there were probably from 400 to 450 members present, many of whom arrived only in time for the banquet. The meetings were poorly attended, the majority remaining in the exhibition hall.

The annual discourse by Dr. Nichols, of Cambridge, was on the "Misuse of Drugs in Modern Practice," an attack upon proprietary nostrums and upon the medical journals which advertise them. He mentioned for purposes of ridicule "Papoid," "Ponca Compound," and "Wheeler's Elixir or Tissue Phosphates." He quoted from the advertisements of each of these to show that they were offered with sham clinical reports, often contradictory, to catch the unwary M.D. "As to the journals which permit their pages to be used in this way, we have the matter in our own hands," he said, and then quoted the statement of editors: "We are not responsible for the use of our advertising pages; we cannot make the paper pay without our advertising." The Doctor also tackled the "cut-price system," showing how by this means certain manufacturers finally reach the public without the medium of the physician. Deploring the lack of law in Massachusetts for the "prevention of quackery," he urged the Society to use its best endeavors to procure legislation in the matter. "None but educated men should be permitted to practice medicine." As an instance of the quackery of some doctors and manufacturers, he cited the action of one of the largest makers of tablet triturates who "offered a *blank* tablet which—the name may be interesting to some of you—they called 'the Harvard Experimental Diagnosis Tablet.' Their representative told me he had just sold 5,000 of them to one of my near neighbors."

A bacteriological exhibit was made by and at Harvard Medical School.

The Board of Health opened its disinfecting station for examination, and also made a display of "health charts," showing the prevalence and fatality of disease in Boston and vicinity.

C. W.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The third annual meeting of the American Electro-Therapeutic Association will be held in Chicago, Sept. 12th, 13th, and 14th, at Apollo Hall, Central Music Hall Block.

Members of the medical profession interested in electro-therapeutics are cordially invited to attend.

AUGUSTIN H. GOELET, M.D., *President.*
MARGARET A. CLEAVES, M.D., *Secretary.*

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

CURIOUS SPHYGMOGRAMS AND "CARDINE" (HAMMOND).

Discussing "Organic Juices in Therapeutics," Dr. J. S. Leonhardt, of Lincoln, Neb., gives utterance to some pertinent criticisms:

After pointing out that William A. Hammond has revived the heresy of Paulus Ægineta, and through the medical press "narrated many remarkable results obtained in the treatment of diseased organs by the administration of an extract obtained from the corresponding healthy organs of inferior animals," he turns to an article on "Cardine" by Dr. Hammond, that is illustrated with sphygmographic tracings that ostensibly exhibit the favorable effects of this "extract" on the heart, and pertinently adds:

"I suppose it is necessary to accept as true the implied allegation that these cuts are *fac-simile* representations of actual tracings taken with a real sphygmograph. I can find nothing like them, however, among several thousand sphygmograms, both clinical and experimental, taken with a Dudgeon instrument, and preserved by me during the past five years. Neither have I seen anything like them in sphygmograms illustrated by writers on cardiac diseases, or the graphic methods of physiological or clinical research. Fig. 1 in the artlcle in question is said to be from a man in good health. Broadbent, with all his lack of confidence in the sphygmograph, would not come to such a conclusion. Personally, if auscultation revealed nothing abnormal in the circulation, I should rather distrust the evidence of my acoustic apparatus than doubt the physical testimony of the machine. The tracing indicates an obstruction in the circulation either at the cardiac orifice or in the course of the arterial distribution. There is nothing normal about it except the speed. Fig. 2 illustrates a tracing taken ten minutes after an injection of five minims of 'cardine;' the writer does not comment on it very liberally. I read it as indicating a pulse rate of about 100 a minute, irregular in both rhythm and volume, weak, of high tension, and without a single well-defined normal feature. In Fig. 3, while the systolic weakness is not so marked as in the preceding, the irregularity is greatly increased, an impossible percussion upstroke is shown, and, as a whole, it does not admit of analysis; it looks more like the *pulsus paradoxus* of Kussmaul than anything else. It certainly cannot be taken as indicating anything favorable in the circulation. None of these cuts are worthy of the least confidence, they are so unlike the careful work that should and usually does characterize the products of an impartial physiological experiment. I dislike to speak disparagingly of these illustrated demonstrations, but the new or revived theory is too opaque and peculiar in itself to admit of the least additional ambiguity, especially when it is the result of an unintelligible experiment."

TREATMENT OF PERFORATED GASTRIC ULCER.

The treatment of perforated gastric ulcer has recently excited a good deal of attention on account of the evident possibility of successful interference in some cases.

The condition can be separated clinically into the three following heads: (1) Acute perforation; (2) perforation in connection with subphrenic abscess, but without general peritonitis; and (3) perforation and subphrenic abscess with general peritonitis.

In the first class the diagnosis is not easy on account of the indefiniteness of the physical signs. But with a history of long-continued indigestion, and especially if there have been evidences of the existence of a gastric ulcer, the onset of sudden pain in the left hypochondriac, epigastric, or umbilical regions, with acute febrile symptoms, in a subject in whom it appears possible to exclude mischief of other abdominal and pelvic viscera, the above condition should be borne in mind.

In the second group, in which there is a subdiaphragmatic abscess, cut off by adhesions between the stomach, liver, and anterior abdominal wall from the general peritoneal cavity, the history is far less definite than in the former class. There are generally, however, certain more or less definite physical signs, the most prominent of which is an abnormal area of dullness or of hyper-resonance in the left hypochondriac or epigastric region—if hyper-resonance a bell note can usually be elicited over the area. In addition there are usually evidences of consolidation of the lower lobe of the left lung, with possibly fluid in the left pleura. The heart's apex may be slightly displaced upwards, and there have been in most cases the usual signs of fever, with pain in the upper part of the abdomen. The above signs appear to be sufficiently definite to warrant surgical interference, in which case an incision above the umbilicus in the middle line appears to be the most satisfactory. The subsequent drainage of the abscess cavity is evidently a source of great difficulty on account of the frequent presence of a deep pocket in the neighborhood of the spleen.

In the third class of cases, in which there are undoubted signs of general peritonitis, the recognized surgical treatment of that condition should be pursued.

WONDERS NEVER CEASE.

Under fair criticism William A. Hammond whines and winces like a youthful canine undergoing punishment. He wishes the discussion of his Organic Extracts "conducted in a decorous manner." "Sincerity of statement should not be impugned" since his contributions to this subject "have been written with moderation and frankness."

Sincerity and *frankness* have ever been the especial forte of Hammond. In the same line he *sincerely* trademarks his organic fluids, and *frankly* endeavors to conceal this fact and also the fact that he is President of, and a stock-holder in, the Columbia Chemical Co., of which his son-in-law also is Secretary and Treasurer; and which Company "alone are authorized by me to handle the animal extracts made by my processes, and that all are made in my own laboratory, under my own supervision."

He "deprecates extravagance" and has "held nothing back;" yet he hangs to his trademark like grim death to a defunct African. Modesty from such a source is too utterly overpowering. Query: Did he hold anything back when he purchased such supplies for the sick and wounded of the Army in the late civil war, that he was justly and disgracefully dismissed the service?

Moreover, Hammond is going to "leave it to the experience of the profession to determine the true value" of "Animal Extracts;" nevertheless, he expects the profession to contribute to his income in no small degree, by forcing them to purchase his trademarked fluids from the Columbia Chemical Co.—at modest (?) prices.

PROF. VON PETTENKOFER'S JUBILEE.

On July 1st Prof. Max von Pettenkofer celebrated the fiftieth anniversary of his graduation as Doctor of Medicine, amidst salvoes of congratulation from his innumerable friends and admirers. One of these, who modestly disguises his identity under the initials "A. W.," has been moved to lyrical expression of his enthusiasm in rhymed Latin verses to the following effect:

Macte nobilis scrutator,
Audax experimentator
Qui edisti "commata."

Omnia quæ tetigisti
Omnia illustravisti
Ardua problemata.

Mentis acie perspexisti
Humum atque reclusisti
Pestilentiæ latebras.

Studio tuo reparata
Urbis fama maculata:—
Te salutat civitas!

The city in question is, of course, Munich, whose hygienic fair fame certainly stood much in need of restoration. Although declined into the vale of years, the venerable hygienist is still, we are pleased to note, in spite of natural infirmities and dangerous flirtations with the cholera vibrio, able to en-

joy life in the way most congenial to him, that is to say, in unceasing intellectual work. Dr. von Pettenkofer, who is now 75 years of age, was, it appears, originally intended for the pharmaceutical profession, and a considerable part of his earlier scientific work lay in the province of medical chemistry. In 1853 he was named Extraordinary Professor at Munich, where his whole career has been spent. Turning his attention to hygiene, he gradually became absorbed in it, and in 1865 he was appointed to the chair of that subject in his Alma Mater. There he has remained ever since, in spite of repeated tempting invitations from the University of Vienna. In acknowledgment of his patriotic determination to stay at Munich, the Hygienic Institute of that city, the first of the kind established in Germany, was erected for him. Of his services to the cause of sanitary progress we need say nothing; his praise is in the mouths of all who are competent to judge his work.

OFFICIAL DELEGATES TO, AND GUESTS OF, THE PAN-AMERICAN MEDICAL CONGRESS.

Practically all of the Governments have appointed official delegates to the Congress in response to the invitation by the President of the United States. The United States Government will be represented by six delegates. The larger cities of all the Latin-American countries have appointed delegates to participate in the proceeding of the Sections on Hygiene, Climatology, and Demography, and on Marine Hygiene and Quarantine, and similar appointments will be made by the cities of the United States. Seventy-six similar delegates have so far been appointed by the Governors of States in the United States. A large number of delegates have been chosen by the medical colleges of the United States and other American countries to attend the Section on Medical Pedagogics, under the presidency of Professor J. Collins Warren, of Boston.

Dr. Ernest Hart, editor of the British Medical Journal, and Prof. Dr. Czerny, of Heidelberg, will be among the distinguished guests of the Pan-American Medical Congress. The latter is booked for the Pan-American excursion to Rome by the "Werra."

THE "SOLECISM" OF "CARDINE."

Dr. Leonhardt, of Lincoln, Neb., questions the genuineness of Dr. Hammond's sphygmograms illustrating an article by the latter on so-called "Cardine," and remarks he can find "nothing like them among several thousand sphygmograms both clinical and experimental," collected during five years; neither has he "seen anything like them in sphygmograms illustrated by writers on cardiac diseases, or the graphic methods of physiological or clinical research."

Hammond thereupon declares Dr. Leonhardt commits a "solecism against good manners for which it would be difficult to find an excuse."

After the scurrilous circular disseminated broadcast throughout the country attacking Parke, Davis & Co. for believing that he (Hammond) might once have told the truth, the "Surgeon-General (retired list)" and hero of an army scandal that brought with it swift retribution and condemnation, is certainly in good position to judge of a "solecism against good manners."

Verily, "consistency, thou art a jewel?"

THE TREATMENT OF CHLOROSIS.

There are few things more satisfactory in therapeutics than the treatment of a properly managed case of chlorosis. Time, however, is required, and too rapid a cure must not be promised. The remedy *par excellence* is iron, and it does not matter what preparation of iron is used. At the present day Blaud's pill of carbonate of iron, made by double decomposition between carbonate of potassium and sulphate of iron, is very popular. Equal parts (½ oz.) of each are combined and made into ninety-six pills, so that each pill contains five grains. Of these from one to two are given at a dose. Reduced iron is also a valuable preparation in doses of one to three grains. Arsenic is a valuable adjunct. It should be given in ascending doses. Fowler's solution is the most convenient preparation, but arsenious acid is also a good form. The latter is now made up in combination with Blaud's pill, one-fortieth of a grain in each pill. This is a small dose. If Fowler's solution is used, the dose may be commenced at a single minim and gradually increased until the physiological effect results, when the dose is again reduced.

Book Notices.

Contents of Scribner's Magazine for July, 1893.

At the Wheel. *Frontispiece.*

The Life of the Merchant Sailor. By W. Clark Russell. [The third article in the series on "Men's Occupations."]

Personal Recollections of Two Visits to Gettysburg. By A. H. Nickerson.

Fulfilled. By Anna C. Brackett.

Foreground and Vista at the Fair. By W. Hamilton Gibson. [The first of a group of "Artists' Impressions of the World's Fair."] Illustrations by the author.

Loneliness. By John Kendrick Bangs.

The Opinions of a Philosopher—Chapters III–V. By Robert Grant.

Arabian Nights Entertainments. By W. E. Henley.

Leisure. By Agnes Repplier.

Musical Societies of the United States and their Representation at the World's Fair. By George P. Upton. With portrait illustrations.

An Amateur Gamble. By Anna Fuller.

A Night. By M. L. van Vorst.

Trout-fishing in the Traun. By Henry van Dyke.

A Pagan's Prayer. By Bliss Carman.

Aspects of Nature in the West Indies—From the Note-book of a Naturalist. By W. K. Brooks.

The Copperhead—Chapters I and II. By Harold Frederic.

The Prevention of Pauperism. By Oscar Craig. [The concluding article in the series on "The Poor in Great Cities.]

The Point of View: Yankee Antipathy to Work—Dr. Sargent's Average American—Shakespeare's Montaigne—"Society" and Maternity.

Contents of the Atlantic Monthly for July, 1893.

His Vanished Star. By Charles Egbert Craddock.

Within the Heart. By George Parsons Lathrop.

In the Heart of the Summer. By Edith M. Thomas.

Admiral Lord Exmouth. By A. T. Mahan.

Passports, Police, and Post Office in Russia. By Isabel F. Hapgood.

A General Election: Right and Wrong in Politics. By Sir Edward Strachey.

Ghost-Flowers. By Mary Thacher Higginson.

The Chase of Saint-Castin. By Mary Hartwell Catherwood.

Governor Morton and the Sons of Liberty. By William Dudley Foulke.

Petrarch. By Gamaliel Bradford, Jr.

Studies in the Correspondence of Petrarch. By Harriet Waters Preston and Louise Dodge.

Problems of Presumptive Proof. By James W. Clarke.

If Public Libraries, why not Public Museums? By Edward S. Morse.

De Tocqueville's Memoirs.

Comment on New Books.

The Contributors' Club.

A Manual of Diseases of the Ear. By George P. Field, M. R. C. S., Aural Surgeon and Lecturer on Aural Surgery, St. Mary's Hospital Medical School, London. In one octavo volume of 391 pages, with seventy-three engravings and twenty-one colored plates. Philadelphia: Lea Brothers & Co. 1893. Cloth, $3.75.

There can be no question of the need of more perfect knowledge of the pathology of the ear, on the part of general practitioners of medicine, if only to remind them of the necessity of the specialist's services in many cases which otherwise would go on to serious or incurable stages. Professor Field has given us a work which makes clear the intricacies of aural anatomy and pathology by the exactness and multiplicity of its illustrations no less than by the explanations of the text. Its popularity is evidenced by the fact that three editions have already been disposed of, the last numbering 3,000 copies. The work has, of course, been revised to keep pace with the times.

New England Magazine for July.

Walter Besant, Camille Flammarion, and Edward Bellamy having each in his own way endeavored to throw upon the canvas of futurity a picture of his own ideas taken for granted, the style threatens to become so popular as to perplex the archæologists of the thirtieth century. Now M. G. L. Underwood writes a next-century love story in the New England Magazine, and names it "A Triumph of Mind." In the same number Walter Blackburn Harte has a notable article on "The Common and Human in Literature," in which he deals unsparingly, and as it seems to us unjustly, with Sir Walter Scott as a novelist; the article, however, has a general ring of soundness in its purpose, whatever may be its flaws of historical criticism. Another view of the genesis of literary invention is given in an illustrated sketch of the life of Jane Austen by Oscar Fay Adams. Among other articles are: "Mount Washington;" "John Ballantyne, American;" "Forests in Europe and America;" and "Diet," which we shall reproduce in the Age.

Notes and News.

Frank Lydston as a Prophet.—

"As for William A. Hammond—well, we did have an idea there might possibly be something in the Elixir until he endorsed it. If anybody thinks that the new sanitarium in Washington will not go, he knoweth little of Hammond's commercial talent. We are in a *qui vive* of expectation of the new novel; surely so fertile a brain can find material in the 'necessary parts of the lamb.' . . . If there is a man in the profession who is any wilier or less to be depended upon than William A. Hammond, we have never heard of him. His insincerity is as pronounced as the brilliancy of his imagination—an imagination that enables him to invent new diseases and write trashy novels with equal facility. No one understands psycho-therapy better than he; indeed, his practice is a combination of metaphysics and the optical delusions indicental to confrontation with a glittering armamentarium which would put the Patent Office to the blush. O quackery, where is thy sting? O science, where is thy victory?"—*Western Medical and Surgical Reporter*, September, 1889.

The Report on the Revision of the Code.—

The Committee on the Code of Ethics of the American Medical Association presented a majority and minority report, on neither of which was action taken. The majority report advised leaving out from the code that part which deals with the obligations of the public to physicians; it recommends that physicians be permitted to patent mechanical devices and to consult with all legalized practitioners. It expresses its belief in the need of a code, and it defines very casuistically the nature of a consultation.

The minority report takes more conservative ground and recommends that the code stand, practically, as it is.

We doubt if any good will come from continuing to discuss these questions. We prefer to teach the gospel of righteousness and let the details be determined by the individual conscience. The individual conscience, we may add, is setting strongly toward consulting with all qualified practitioners who enjoy a reputation for honesty among their fellowmen.—*Medical Record.*

Chlorobrom in Sea-Sickness.

A. Napier Ledingham, M. B., C. M., F. F. P. Glas., D. P. H. Eng., writes: After an extended trial of chlorobrom in marine practice, where the patients were under observation for some months, I have no hesitation in pronouncing it the most satisfactory remedy yet produced for the treatment of sea-sickness. In those cases particularly where the patients, though not suddenly and violently sick, were in a state of chronic misery with headache, nausea, great depression, sleeplessness, and no appetite (a condition frequently dangerous in delicate people undergoing a long voyage) I have found chlorobrom properly administered most valuable; as a rule, the nervous symptoms disappear and the patients never fail to gain refreshing sleep and generally make a rapid recovery. Its ease of administration, safety, and complete absence of objectionable after-symptoms, are points of great importance. I have also found the solution exceedingly useful in many cases of insomnia and nervous derangements.—*London Lancet.*

A New Non-Poisonous Disinfectant, Izal.—

This substance is of English origin, and The Lancet for July 1st states that it has been approved by Dr. Klein, biologist to the Brown Institution. It is derived from an oil that appears as a residuum from coke-making at the collieries, especially at those situated at Thorncliffe, near Sheffield. As a destroyer of germs, izal takes a higher rank than carbolic acid, but is non-poisonous unless the quantity ingested is very large. Extensive experiments in Dr. Klein's laboratory tend to show that one part of izal in two hundred parts of water is capable of destroying the micro-organisms of diphtheria, scarlet fever, glanders, erysipelas, and cholera.—*New York Medical Journal*, July 22, 1893.

The A. M. A.'s Roster Diminishing.—

According to the former editor of The Journal of the American Medical Association, the total membership of the Association

has steadily decreased for the last five years, until it is now 50 per cent. less than it was in 1888. This condition of things is serious, and shows that there is some inherent defect in the organization and conduct of the Association. Dr. Culbertson's remedy is to abolish the delegate system, and reorganize on a plan like that of the National Legislature. The scheme seems most impracticable, but it appears that something must be done. The new editor, Dr. John B. Hamilton, is energetic, and may prove wise enough to devise a way of stopping the ebbing tide.

Section on Materia Medica and Pharmacology, Pan-American Medical Congress.—

A Section on Materia Medica and Pharmacology has been organized under the executive presidency of Professor Joseph P. Remington, of Longport, N. J., with Professor F. G. Ryan, 3739 Brown St., Philadelphia, as English-speaking secretary. This Section promises to one of the most important of the entire Congress. Delegates have been invited from all the pharmaceutical societies and colleges in all the Americas. Those contemplating attendance are invited to prepare papers on pharmaceutical topics. Titles should be sent at once to Professor Ryan, Secretary.

Settled Out of Court.—

The suit of Dr. Charles E. Simmons against the executors of the estate of the late Samuel J. Tilden, of New York, for professional services for eight years, up to the death of Mr. Tilden, has been settled out of court, the defendants agreeing to pay Dr. Simmons at the rate of $5,000 a year for the eight years' service claimed by him, with interest up to the date of Mr. Tilden's death. The case has been pending five years. Dr. Simmons sued for $143,300, with interest. He claimed that he had a verbal agreement with Mr. Tilden whereby he was to be paid $50 a day for his services.

New Form of Tourniquet Fastening.—

Messrs. Arnold & Sons have introduced a new form of grip or fastening for an elastic tourniquet, for which a patent has been applied. It is very simple, light and inexpensive, made in the form of a hook, but tapering towards the end with an India-rubber ring for attachment. It can be secured or released instantaneously. By simply placing the tubing in the hook it is held firmly and securely, and by a gentle outward pull it can be immediately released.—*London Lancet.*

The Treatment of Diabetes Mellitus with Raw Pancreas.—

Following the analogy of the treatment of myxœdema by thyroid juice, experiments have been made in several English hospitals of feeding raw pancreas to cases of diabetes. White finds that most patients take the raw pancreas quite easily. The patients gained in body weight and felt better; but in most cases the amount of sugar and quantity of urine was not diminished, although in some it was.—*Boston Medical and Surgical Journal.*

Officers of the Ohio Society.—

At the last meeting of the Ohio State Medical Society the following officers were elected: President, N. P. Dandridge, Cincinnati; First Vice-President, F. C. Larimore, Mt. Vernon; Second Vice-President, Wm. Caldwell, Fremont; Third Vice-President, W. T. Corlett, Cleveland; Fourth Vice-President, L. S. McCurdy, Dennison; Secretary, Thos. Hubbard, Toledo; Assistant Secretary, Charles Graefe, Sandusky; Treasurer, J. A. Duncan, Toledo.

Change of Title.—

Daniel's Texas Medical Journal has changed its name to the Texas Medical. A rose by any other name is just as red, and we understand that the Texas Medical Journal will continue to add to the joy of living, in the same vermilion tints.—*Medical Record.*

Death of Dr. Carson.—

Dr. Wm. Carson, one of the oldest and most highly esteemed practitioners of Cincinnati, O., died suddenly Sunday evening, July 9th.

Therapeutic Brevities.

Bromide-of-Ethyl Anæsthesia.—Dr. L. S. Ginsburg, in his graduation dissertation in the Imperial Medical Academy of St. Petersburg, gives an account of a large number of observations on the pharmacological action of bromide of ethyl on dogs and rabbits, which he carried out in Professor Pavloff's laboratory. He administered it by inhalation, by artificial respiration of the vapor, and by intravenous injection of an emulsion. He finds that the inhalation of air containing a small quantity of the vapor induces sleep, the blood pressure remaining normal, and the pulse becoming more rapid though not losing its regularity. If the air is charged to a greater degree with the vapor, the blood pressure is at first markedly lowered, but in consequence of the changes in the respiration and the consequent diminution of vapor inhaled, the blood pressure afterwards rises to a little above normal. The irregularities of the cardiac pulsation which occur during the diminished blood pressure disappear as it rises again. If the air is charged with a very large quantity of the vapor, there occurs only a slight secondary rise of the blood pressure, doubtless because of the injurious effect of the vapor upon the regulating centre of respiration. In this case respiration is rapidly arrested. The acceleration of the pulse after the inhalation of air containing a small quantity of vapor, depends on the stimulation of the automatic cardiac centres or of the accelerator nerves. The slowing which follows the inhalation of a series of large doses is due to the diminution of the irritability of the cardiac muscle. The fall in the blood pressure arises from paralysis of the peripheral vaso-motor nerves, and if the doses are large the heart assists in producing this fall. Bromide of ethyl has no effect on the pneumogastric nerves, the vaso-dilator centres, or on the peripheral vaso-dilator nerves. Dr. Ginsburg's researches show that bromide-of-ethyl narcosis can be obtained while the blood pressure remains normal, and that when too much bromide of ethyl is given the cessation of respiration precedes that of the heart; but, at the same time, his experiments prove that large quantities introduced into the blood cause considerable disturbance in the heart's action. This last point is one of great practical importance, and shows that in bromide-of-ethyl narcosis the same precautions ought to be taken as in the administration of chloroform. Anæsthesia comes on rapidly, but goes off very soon after the inhalation is stopped, though where the operation is a long one, care must be taken that the patient should inhale a sufficient quantity of the vapor. Although bromide of ethyl cannot in all cases serve as a substitute for chloroform, Dr. Ginsburg is convinced by personal experience that it is frequently preferable to the better known anæsthetic.—*London Lancet*, Feb. 18, 1893.

Cocaine Phenate.—Cocaine phenate is a slightly colored substance of thick honey consistency, which readily melts when heated, and whose percentage of cocaine alkaloid is 75. It is readily soluble in proof spirit. The solution has a faint odor of carbolic acid. It is soluble in colorless paraffin oil. The dose is from $\frac{1}{12}$ to $\frac{1}{6}$ grain by the stomach. Locally, it coagulates the albumin in the tissue, preventing the absorption of the cocaine, thereby prolonging the anæsthetic effect and lessening the danger of systemic poisoning. In this combination we therefore possess, theoretically, a drug which has local anæsthetic properties with slow absorbing power, and which should also be slightly antiseptic.

Dr. C.A. Veasey, of Philadelphia, has made an exhaustive experimental examination, and, though the cases he cites are few in number, the drug has been used by him in many others with equally good results. From his experiments and cases of treatment in diseases of the ear, eye, throat, and nose, it seems that the following conclusions are justifiable:

1. In cocaine phenate we have a drug that can be successfully used, without producing systemic effects, in those cases in which there exists an idiosyncrasy to the local use of cocaine hydrochlorate.

2. As good an anæsthetic effect can be produced with cocaine phenate as with cocaine hydrochlorate, but stronger solutions are required to produce the same degree of anæsthesia.

3. The anæsthesia does not come on so quickly with the phenate as with the hydrochlorate, but lasts fully as long, if not longer, than the anæsthesia from the latter.

4. In some cases, though there be no physiologic contra-indication to the use of the hydrochlorate, the phenate is to be preferred on account of its antiseptic properties.

At the present time it is next to impossible to treat successfully diseases of the eye, nares, pharynx, and larynx, or to perform operations upon these parts without the aid of cocaine; therefore, the manufacturing chemist has been trying to produce some

preparation that would possess its advantages without its disadvantages.—*Medical News.*

Losophan.—A considerable share of the diseases of the skin which come under the observation of the physician is of a parasitic origin. It is a well known fact that many of these affections are extremely rebellious to treatment and severely tax the resources of the physician. Mercurials, which are probably the most commonly employed parasiticides in these cases, frequently fail, or they poduce irritant and even poisonous effects, compelling discontinuance of their use. The other parasiticides are uncertain in their action, and it is frequently necessary to change from one to the other. Recently a compound of iodine and cresol has been brought forward under the name of Losophan which seems to possess all the essentials of an effective remedy in parasitic diseases of the skin. The combination of iodine and cresol, both of which are powerful antiseptics, in a single remedy argues *a priori* in favor of its utility; and the experience of Dr. Saalfield (*Thérap. Monatshefte*) goes to confirm the truth of this statement. This observer employed Losophan in a large variety of affections of the skin, with very favorable results. In tinea tonsurans of the face, scalp, and body, a 1- to 2-per-cent. solution in alcohol and water effected a cure in the vast majority of cases, while in pityriasis versicolor a 1- or 2-per-cent. ointment proved very useful. Parasitic sycosis, which, as is well known, is exceedingly obstinate to treatment, was much improved, and in cases of pediculosis capitis or pubis the 1-per-cent. solution of Losophan was found a convenient and rapid means of destroying the parasite. It would also seem that the remedy is destined to occupy a prominent place in the therapeutics of non-parasitic affections of the skin, such as chronic eczema, sycosis vulgaris, acne vulgaris and rosacea, etc.

The Treatment of Acute Dysentery by Sulphate of Soda and the Intestinal Antiseptics.—Dr. E. Gruet, rejecting ipecac and calomel because they possess such properties that they will be only employed in exceptional circumstances, believes that in the combination of sulphate of soda—which, used alone, acts slowly and is efficient only in certain forms of this disease—with intestinal antiseptics he has found a satisfactory solution of the problem. Two and one-half drachms of sulphate of soda, in about seven ounces of water, are taken in four portions each day, at intervals of three hours. Seven grains of naphthol are administered in wafers at intervals of three hours, each dose to be followed by several swallows of milk. If this remedy is not well borne, salol is to be substituted. Each afternoon an injection of either boric acid 20, or naphthol 0.25, or carbolic acid 0.50, to warm water 1000, is to be given; a quart being a suitable quantity. A milk diet is insisted upon during the entire treatment. This method should be continued until the stools again show their normal consistence and composition. Certain precautions should be observed: if deep ulcerations are suspected, one pint of injection is sufficient; boric acid, with which this treatment is commenced, may produce a desquamation of the mucous membrane, therefore it should be used once only in four or five days, either naphthol or carbolic acid taking its place on the intervening days; at the end of treatment nitrate of silver, in ½ of 1-per-cent. solution, yields good results. Accessory methods are: warm fomentations of camphorated oil of chamomile over the abdomen, a laudanum-starch enema toward evening to relieve tenesmus and allow sleep.—*Bulletin Général de Thérapeutique*, 1892, xxviii, p. 88.

Jambul in Diabetes.—Dr. V. E. Lawrence, Halstead, Kansas, nearly two years ago, in a decided case of diabetes, with specific gravity of urine 1.035, prescribed the usual diabetic diet, with fluid extract of jambul in 8-drop doses as the only medicine, with marked improvement in two weeks' time. In another two weeks the restriction of diet was removed with the exception of sweets, without check to the diminution of sugar in the urine, which later on entirely disappeared, and since then has not recurred.—*Medical News.*

This appears to be a small dose, as C. F. Britto is reported in the Indian Medical Record to have given one drachm three times a day, with no alteration of diet, and an ultimate result of nearly complete recovery.

At a meeting of the Royal Medical Academy of Rome on Jan. 22d, Leoni (Gazz. d. Osp., Jan. 31st) reported the results which he had obtained in four cases of diabetes mellitus with extracts of the seeds and bark of Syzygium Jambolanum. The doses given varied from 10 to 100 grammes in the twenty-four hours. In three of the cases there was marked diminution in the quantity of urine and of the sugar and urea contained in it; coincidently with this effect the patients gained weight and improved in their general health. In the fourth case, on the other

hand, the amount of urine, sugar, and urea was increased, but notwithstanding this the body weight increased and the patient improved greatly in health. Leoni concludes that Syzygium Jambolanum contains some active principle which is capable, in some cases, of neutralizing the diabetic process, but he does not look upon it as a specific for the disease.—*British Medical Journal.*

Alum Oil.—This is a new drug of an astringent, antiseptic nature, and is described as a naphtho-sulphate, containing 5 per cent. aluminium and 15 of sulphur, light reddish powder, non-hygroscopic, easily dissolved in cold water, but the solution is cloudy in warm water. After a short time in air the powder becomes dark from its reducing power. It is acid, like all the aluminates, in reaction; it deposits albumin, which is redissolved by an excess of the latter, more particularly the gelatin series. This property is held to be of service in deep purulent discharges. Its antiseptic properties as tested seem favorable. A 1-per-cent. solution killed the spores of anthrax, pyocyaneus prodigiosus, etc., within twenty-four hours, which classes it equal to sublimate in its germicidal power. A solution of 0.1 per cent. retards the growth of anthrax, cholera, pyocyaneus prodigiosus, staphylococcus germs in cultures. Small doses, however, can be repeated for any length of time without any adverse symptoms. It has been used with beneficial effects in surgery, in discharging serous surfaces, chronic purulent abscesses, and stubborn fistulæ. Endometritis, gonorrhœa, colpitis, etc., are rapidly benefited by its application. In dermatology there seems to be no end of cases where the improvement was rapid and efficacious.—*Medical Press.*

A Promising Agent in Respiratory Therapeutics.—As we progress in therapeutic investigation we come nearer to the ideal in the treatment of diseased conditions, the identification of the specific action of certain remedies upon special organs or tissues of the body. The scientific world seems now to have taken another step in the direction of this goal in the demonstration of the specific effects of cocillana, a plant of Bolivia, South America, upon the respiratory tract. First introduced to the scientific world by Dr. H. H. Rusby in 1886, it has been christened *Sycocarpus Rusbyi* after the doctor who brought it forward.

The bark is the portion of the plant used in medicine, in the form of a fluid extract, dose from 10 to 30 minims. It has been demonstrated to be of especial value in chronic bronchitis, in which the secretion gradually becomes less viscid and diminishes in amount. It is also useful in bronchopneumonia. It is certainly worth trying in all obstinate affections of the respiratory tract. The drug somewhat resembles ipecacuanha, sometimes producing slight nausea. It is also observed to have a laxative effect upon the bowels.—*Medical World*, March, 1893.

Gonorrhœa—Abortive Treatment.—To abort gonorrhœa, Dr. Jamin washes out the anterior portion of the urethra several times daily for about four days with a solution of potassium permanganate of the strength of 1–4:1000 of water. The first three washes are made at intervals of about five hours; the subsequent ones, only every twelve hours. After the first injection, it is claimed, there are no more gonococci in the urethral discharge; the other washes are intended to destroy the latent germs in the urethra.

The injections of potassium permanganate, when made according to Pezzer's method, are reported to succeed very well. The liquid is injected through a red rubber catheter with thin walls aud lateral perforations throughout, through which the injected fluid emerges and thus bathes the mucous surface of the urethral canal maintained dilated.—*Merck's Bulletin.*

Borate of Soda in Paralysis Agitans.—Borate of soda, which has been found useful by various authorities in epilepsy, has been tried with remarkable success by Dr. Sacaze, *chef de clinique* in Professor Grasset's wards in Montpellier, in a case of paralysis agitans where the actual cautery, electricity, suspension, iodides, and various other forms of treatment had proved fruitless. The drug was given at first in 4-grain powders three times a day, and after a few days the dose was gradually increased to about double that quantity. An improvement was manifest by the end of the first week, and after that the patient's condition continued to improve still further. After a time he was able to walk, to speak distinctly, to feed himself, and to write, none of which things he could accomplish before the borate of soda was commenced. No disagreeable effects were produced by the drug.—*London Lancet.*

Difficulty of Sterilizing Sponges.—Sir Joseph Lister having in a recent address suggested that sponges for use in surgery be sterilized by being boiled, the Pharmaceutical Journal

and Transactions points out that Dr. Braden Kyle has found that sponges used in septic cases and re-sterilized by soaking in bicarbonate of sodium solution for twenty-four hours, and afterward in 5-per-cent. carbolic acid for a week, were still capable of conveying infection, as shown by testing the inner portion with gelatin. From this it is suggested that it would be best to discard sponges altogether, and employ only fresh gauze in dressings.—*Druggists' Circular*, May, 1893.

Value of "Organic Extracts."—G. Bogden (de Jassy) has made a series of injections upon different patients with both testicular fluid and liquids procured from the gray substance of the brain. The results obtained, however, have only been minimal and do not prove the efficacy of this mode of treatment. The author complains that these injections are unable to cure the affections against which they are directed, and that the slight amelioration experienced in certain instances he is satisfied was due purely to simple "suggestion."—*Revue Internationale de Bibliographie*, June 25, 1893.

Hiccough Treatment.—La Revue Générale de Clinique sums up the treatment as follows:

When it is provoked by sensation of hunger, swallow bits of bread.

When produced by distension of the stomach and intestines with gases: Tr. nuc. vom., gtt. xv to gtt. xxx; or ol. absinth., 0.5 to 1.0 (♏ viiss to ♏ xv); or bismuth. subnit., 1.0 to 2.0 (gr. xv to gr. xxx).—*Journal of Balneology*, April, 1893.

The Treatment of the Nausea and Vomiting of Pregnancy.—Frommel reports, in the Centralblatt für Gynäkologie, 1893, No. 16, four cases of obstinate nausea and vomiting of pregnancy treated by orexin. The effect upon all was excellent, although during previous pregnancies some of the patients had been persistently sick. The dose of orexin was 5 grains given twice or three times daily in wafer or gelatin capsules.

Turpentine in typhoid fever is coming more and more in favor with the newer generation, though with many older practitioners it has been the drug upon which the greatest reliance has been placed. Wood regards it as invaluable where, in convalescence, symptoms point to slowness in healing of the ulcers, or where, in the second week, there is decided tympanites.—*Medical Record*, Feb. 4, 1893.

Medical Progress.

A Brief Review of Some of the Recent Practical Advances in Medicine and Therapeutics.—Very closely associated with the improvement in therapeutics is the increased accuracy which modern research has placed in our hands, for the correct diagnosis of a case must always be an important preliminary to proper therapy. Not the least of these diagnostic gains is the ability which we possess to recognize the presence of tuberculosis when the signs of the disease are so indefinite that positive information of the condition of the patient cannot be gained. Again, in many instances, where unusual and aberrant symptoms are present, microscopical examination of the blood may show the presence of various micro-organisms. Nor should we forget the valuable aid rendered us by the advances in the diagnosis of gastric affections by the use of the stomach-tube, and the microscopical and chemical examination of the gastric contents, more especially in regard to the absence of hydrochloric acid in cancer and its excess in cases of gastric ulcer. Finally, an important aid to diagnosis in gastric disorders was the introduction of salol by Ewald to determine the motility of the stomach and the question of dilatation or atrophy.

The day is past when there is any excuse for the physician dodging a diagnosis and treating a patient on the indefinite basis of "general principles," and the public have learned that the shot-gun prescription of years ago is only a cover for the ignorance of the medical attendant who expects the various drugs to influence an area the diseased state of which he is himself unable to discover.

It is necessary that diagnosis should be well enough advanced to enable us to discover the exact stage of a malady and the precise condition of the patient's system in addition to the knowledge that a given disease is in existence in his body.

Fortunately, the improvements in diagnosis and treatment have kept pace with one another. The advances have been rapidly yet gradually accomplished, not by startling leaps, but by small and lasting accretions which have formed on the sides of our older views, either modifying their appearance or completely changing their aspect.

Let us, if possible, discover in what directions we have really made distinct advances. A very important part of this advance has been recognition of the fact that many conditions heretofore regarded as distinct indi-

vidual maladies, and treated accordingly, are in reality merely manifestations of functional disorder elsewhere. No more interesting example of this can be adduced than anæmia. But a few years ago we were taught that anæmia was a state in which the blood was impoverished, and the conditions of anæmia might be divided into those which were simple and essential, or, in other words, those which would respond to treatment and those that would not. We had this empirical information, and we also knew by experience that while iron was useful in one form of simple anæmia independent of malignant disease, arsenic was more valuable in another. Later than this we came to regard anæmia chiefly as a manifestation of disease in certain blood-making organs, or an important symptom of many perverted functions; and, finally, the invention and employment of the hæmatocytometer and the hæmoglobinometer has enabled us to separate anæmia into a condition in which there is a decrease in the number of corpuscles or a decrease in the amount of hæmoglobin in each corpuscle. In other words, we now know that pallor may be due to too few corpuscles or too little hæmoglobin, and, this being known, it is only a step to the understanding of the empiricism of years ago in regard to the use of iron and of arsenic—namely, that in that form of anæmia due to a diminution in the number of blood-cells, arsenic did good, because by its alterative powers it increased cell activity in blood-cell-making organs, while where hæmoglobin was lacking iron came particularly into play. For these reasons we find that small doses of alteratives, such as corrosive sublimate and other mercurials, often overcome the anæmia due to deficient manufacture of cells. We may, therefore, explain why arsenic usually fails to do good in chlorosis, and anæmia of deficient hæmoglobin, and succeeds in pernicious anæmia, which is characterized by deficient corpuscles but relatively increased hæmoglobin.

The therapeutist recognizes two very important points, the causes of which the pathologist must eventually solve—namely, that one class of anæmias are due to defective or deficient hæmogenesis, and another to excessive hæmolysis. Unfortunately, it is at present impossible for us to separate clinically the hæmogenous anæmia from that of hæmolytic excess unless we find evidence of great corpuscular disintegration in a copious elimination of hæmoglobin in the urine, or a jaundice evidently hæmatogenous in character, or a large number of defective corpuscles, which would perhaps indicate defective hæmogenesis rather than that they were scarred veterans of a battle with a poison in the liver-cells or elsewhere. Post-mortem signs often aid us in the differential diagnosis, but this is too late to do any good to the doctor or patient.

There is one point, however, about which there can scarcely be any doubt, and that is that in many cases iron is greatly abused, being given when there is no indication for it, or more frequently given in excessive dose. By excessive dose I refer to as much as 6 to 10 grains in a day of reduced iron. The amount of iron in the human body is very small, and every study ever made of its absorption and elimination after absorption has shown that these processes are very slow. Hamburger recovered from the fæces nearly all the iron administered, and Jacobi proved that even when the iron was injected into the veins, 10 per cent. was at once eliminated by the bowels, liver, and kidneys, and the remainder deposited in the liver, spleen, and other tissues in the same manner as is any metallic substance. The researches of Gottlieb have also been in confirmatory lines. When we consider that there is in the human blood only about 39 grains of iron all told, we can see that the use of 12 grains a day in the course of a little over three days places a double quantity of the metal in the economy, which is not needed, and is either cast out, or deposited at any conveninet spot there to lie undisturbed until it can be extruded.

There is only one excuse for the use of the doses named—viz., a condition of the digestive apparatus which results in the formation of a sulphide of iron in great quantity, so that only an infinitesimal amount escapes into the system. This explains the empirical fact that in some cases of chlorosis or intense anæmia iron has to be given in large doses to accomplish any good.

One of the best and most recent papers on this subject is that of Ralph Stockman, who gives a masterly summary of the subject of the absorption of iron in chlorosis. In this summary he points out that we have three chief theories as to the action of iron in anæmia. The first—the absorption theory—is based on the fact that, as iron is taken into the body with the food, the iron of the hæmoglobin must be obtained from this source, and therefore that medicinal iron given by the mouth must be absorbed. The second theory rests upon the belief that iron is not absorbed when given by the mouth in addition to that in the food, but simply acts as a stimulant to the mucous membrane of the alimentary canal, therefore increasing the digestion of food, and so overcoming

anæmia by the general improvement coincident upon proper nutrition. The third theory is that of Bunge—namely, that in chlorotic conditions there exists an excess of sulphur or sulphuretted hydrogen in the bowel which changes the iron in the food into a sulphide of iron, which Bunge states cannot be absorbed. He believes that the inorganic iron which is given as a medicine saves the organic iron of the food by combining with the sulphur, and so indirectly cures the anæmia by the protection afforded the food iron. It is important to remember that each of these theories has been supported by many careful experiments, but it is also well to bear in mind that both the hypotheses and the experiments supporting them may be erroneously based. Thus, we have no right to imagine that the inorganic preparations of iron have a stimulating power over the alimentary mucous membrane, or even if they have, that this power is exercised in the peculiar line of aiding in the absorption of the organic iron of the food. Again, the researches of Hamburger, Damaskin, Gottlieb, Müller, Jacobi, and Socin, which show that after the internal use of inorganic iron there is no increase in the iron in the urine, are valueless so far as the conclusions drawn by them are concerned—namely, that as there is no increase in iron in the urine there is none in the blood, and therefore it is not absorbed. These conclusions are not justified, because they are based on the erroneous view that because iron is not in the urine it is not in the blood, and because it is not in the blood it is not absorbed. Every one knows that in the case of chronic lead-poisoning, when the body is saturated with the metal, there is often no lead in the urine, the poison being deposited in the tissues; and if this is true of lead it may be of iron. Particularly is this to be remembered when we find Stockman quoting the researches of Mayer, Bidder, and Schmidt, and a host of others, who have proved that we are not to look to the kidneys as the path for the excretion of iron, but to the intestinal walls. Finally, Stockman has proved that when iron is used hypodermically it cures anæmia when it cannot stimulate the digestion or counteract sulphides.

Leaving the interesting and intricate subject of anæmia, and its diagnosis and treatment, we find another condition now recognized as a symptom, though often still classed as a disease—namely, asthma. Every case of this condition will present some evidence of reflex irritation or other extraneous cause if it is carefully sought for, such as metallic poisoning, hay-fever, cardiac or naso-pharyngeal disease. It will be remembered that at one time we had two schools of thought concerning the actual local cause of an asthmatic seizure, the one claiming that the obstruction to respiration was due to swelling and hyperæmia of the mucous membrane of the bronchial tubes; the other, that it was the result of a spasm of the muscular fibres of these tubes. Now we know that both conditions exist, and that both are probably the result of irritation or preverted function of the vagus nerve, for the filaments of this nerve are not only supplied to the bronchial muscles, but also the local vessels. Further than this, the peculiar relation of these important nerves to the cardiac, gastric, and pulmonary area and to the recurrent and superior laryngeal nerves all tend to complete a chain of physiological evidence hard to equal, particularly when we remember that the vagus is the governing nerve of the respiratory function, and that its origin is intimately associated with important vital centres and nerve-roots in the medulla. Here, then, we have an improvement in etiological knowledge which enables us to discern a cause and give an explanation of almost every empirical fact regarding the use of anti-asthmatic drugs, since nearly every one of these we now know depends upon its action upon the unstriped muscular fibres, the vagus nerve, or on the depression of reflex activity for its therapeutic power.

There is still another condition which is gradually passing from the list of diseases into the list of symptoms—namely, diabetes mellitus. Not only does injury to Bernard's centre in the fourth ventricle result in hepatic hyperæmia, which in turn results in glycosuria, but section of the vaso-motor fibres in the spinal cord at such a point as to involve the nerves of the liver results in similar disorder, according to Schiff. Pavy has proved that destruction of the superior and inferior cervical sympathetic has this effect, and it has been known to follow intense inflammation or irritation of such nerves as the sciatic and trigeminus, and some have gone so far as to refer the glycosuria seen sometimes in those suffering from sciatica to the sciatic irritation.

Furthermore, we have now before us undeniable evidence that such a thing as pancreatic diabetes may occur. Years ago it was first noted as a physiological possibility, but the recent studies of Minkowski and Von Mering, with several others, have placed the entire question in a better light. Extirpation of this gland results in glycosuria; but if one-fifth of it is left behind, the sugar does not appear in the urine, and this, with other

facts, points to the pancreas having a power through a ferment rather than by its general secretion. Clinical cases are also now on record in which after death there has been found a condition of fatty degeneration or atrophy of the pancreatic gland. If a remedy successful in one case fails in another, it is probably because the physician has failed to discover that the cause in each case is not identical.

The ability to apply observation to cases, with resulting accurate diagnosis and still more accurate therapeutics, can be admired in every instance where it is observed, but it would be difficult to name a more eminent illustration of the beneficent results of such a trinity of good offices than is pictured by the work of Lauder Brunton on the nitrites. Brunton had noticed two facts, the one in the sick-room, the other in the laboratory. By the bedside he found that in many cases of angina pectoris a condition of intense arterial tension existed, which was manifested not only in the cord-like condition of the arteries, but also by the pallor of the skin due to contraction of the peripheral capillaries. This condition often preceded the attack of pain. Instead of tossing this discovery aside with the dogmatic belief that it was a secondary result of severe pain, he looked further to see if there was a causal relationship between the two conditions. Remembering that the over-distension of any muscular cavity, such as the bladder or intestine, results in pain, it occurred to him that a spasm of the arterial system might result in such over-distension of the heart-muscle, already feeble, as to cause the typical pain of angina pectoris; and this hypothesis was supported by a recollection of several facts —namely, that exercise always produces contraction of the blood-vessels, partly by the contraction of voluntary muscles on large areas of capillaries, by the increased demands on the circulation, and, finally, that it is in gouty persons with irritable blood-vessel walls that angina pectoris most frequently asserts itself.

In the laboratory Brunton had found that the nitrites all lowered arterial pressure, and by so doing caused the heart to empty itself very readily of blood, partly by depressing the vagus nerves and so permitting increased cardiac action. Here, then, was, in theory at least, the very remedy which should meet the indications in heart-pang, and the practical application of the hypothesis has given us that valuable method of treatment so universally employed.

The interesting relationship between physiological and chemical research and practical therapeutics, when they are associated through logical deduction, can also be readily studied in the production and use of a number of compounds, but in none other more satisfactorily than in the nitrites. Chemistry showed the various combinations which could be formed in this series, and proved that some of them were more stable than others. The pharmacologist showed that those which had stability were more slowly decomposed in the animal organism, and in consequence that their action was not so sudden nor so fleeting. And the therapeutist, recognizing that an unstable preparation, such as nitrite of amyl, could only be used for momentary effects, at once found the stable compounds of peculiar value when continued action was desired. It is because of this stability and consequent comparative slowness of action that the nitrites of sodium, potassium, and nitroglycerin find favor, and that the still more recently employed and more stable compound, cobalto-nitrite of potassium, bids fair to come into general use.

It has been proved by experimentation on the lower animals that it is practically impossible to produce death by irritation of the vagus, and we know that death rarely occurs in the first stage of shock unless there exist previously cardiac disease in the muscles or valves. We very rarely see shock in its first stage, except in the man who has "his breath knocked out of him" by a blow, not over his lungs, but over the solar plexus, which reflexly results in vagal irritation. It is the second stage of shock which we are called upon to treat. Here we have the entire vascular area in a condition of profound relaxation, a condition exceedingly dangerous to cardiac integrity. The blood-vessels relaxed, the heart pumps, as it were, into vacancy, or as impotent of result and as exhaustingly as the wheels of an engine on a slippery rail. The result is rapid failure of the cardiac muscle by reason of futile endeavor and because the coronary arteries are imperfectly filled. The great arterial relaxation also results in serious changes in nutrition, and the profuse sweat weakens and chills the body. It is at this time that the employment of belladonna or atropine becomes valuable in the extreme. By its peculiar influence on the vaso-motor centre it produces normal vascular tone, stops the leaking skin, and steadies the circulation, simultaneously tending to raise bodily temperature. If at the same time hot coffee be given, as a cardiac tonic containing heat, and strychnine is used, we have a fulfillment of every indication.

Thanks to the studies of Ferrier and a host of others in England and on the Continent,

we now know that true epileptic seizures have their origin in the cortex, and practically nowhere else. This being known, the rationale of the employment of the bromides in this disease was speedily explained through the researches of Albertoni and of Seppilli, who found that these preparations so depressed the cerebral cortex in its motor area that far stronger currents were required to elicit muscular response when the animal was under the influence of bromides than when in his normal state or under the influence of the ordinary anæsthetics. At the same time that this depressant action of the bromides was discovered, its powerful influence as a depressant to reflex action became fully appreciated, and its influence in a convulsive disorder such as epilepsy became the better understood.

It is true that there is still a great deal to be done before we discover the changes in the cerebral cells which permit of epileptic changes; but those of you who have had the opportunity to study the elaborate research of Hodges, of Madison, in this State, will already have reasoned that if the changes in the nerve-cells produced by excessive exercise can be studied by means of staining and the microscope, it is not impossible for the changes in epileptic cells to be noted by methods of a similar character, particularly as epilepsy is a disease which is seen in the lower animals as in man.

While such studies as those which have just been mentioned show advances in the indications for and rational employment of drugs, instances are not lacking in which contra-indications to the use of some remedies have been developed or the empirical knowledge of their contra-indication explained. Thus, it had been a recognized fact in therapeutics that quinine, when given in full doses, always caused an increase in the number and severity of epileptic seizures in those who were subject to this malady, but it remained for the experimental therapeutist to show that quinine stimulated the cerebral cortex, and so caused increased irritability of the motor area.

Again, the knowledge of the depressant action of chloral on the motor tract of the spinal cord, and the same effect of bromides on the sensory tracts, has placed in our hands the best antidotal treatment for strychnine-poisoning; while the discovery that conium produces muscular quiet by depressing the motor nerves and not by acting on the spinal cord, shows us that in spinal convulsions its employment is irrational, because it only blocks the pathway to the muscles, instead of preventing the discharge of impulses by acting on the parts directly at fault.

The discussion of this topic would not be complete did I not refer to one very familiar example of the value of physiological and pathological research in relation to disease—namely, the discovery of the malarial germ, and the fact that quinine kills this organism. Only ten years ago we were taught that the use of quinine in malarial disease was purely empirical, and to-day its rational employment is accepted universally all over the world.

We are certainly passing through the golden age of medicine, and by the rational line of our advance are avoiding many of those theories which have misled our predecessors into beliefs since proved to be erroneous.—Dr. H. A. Hare, in *Therapeutic Gazette*, June 15, 1893.

New Remedies and their Application.—In a paper read by L. P. Bethel, M.D., D.D.S., Kent, O., before the Northern Ohio Dental Association, at Akron, May, 1893, the author said:

Eucalyptus and thymol antiseptic is a preparation containing borate of soda, benzoic acid, boric acid, thymol, oil of eucalyptus, oil of wintergreen, oil of thyme, oil of peppermint, and fl. extract of wild indigo. It may be used externally or internally. It is a non-coagulator of egg albumin. It may be freely used as a mouth wash, root dressing, general detergent, for cleansing the hands, and wherever a good antiseptic is desired. It may be used freely about the mouth, as it is non-poisonous, non-irritating, and not injurious to tooth substance.

Johnston's ethereal antiseptic soap is one of the nicest preparations for rendering the hands antiseptically clean that I have seen. It is in the form of a liquid soap. When used it has a strong ether odor, but no odor remains after rinsing the hands, and they are left white with a soft velvety feeling to the skin. Bichloride of mercury may be added to the soap without precipitation, an advantage over other forms of soap.

With a view of testing the comparative values of the above antiseptics, pure cultures of pyocyneus (a bacillus found in pus) were used by taking a small quantity of the antiseptic and placing on a glass slide, mixing in some of the culture, and placing a cover-glass over this, examining through the microscope. This bacillus is actively motile, and when movement was suspended it indicated that the germs were killed. Caustic, antiseptic, and medicinal pyrozone acted immediately; no movement was seen after the slides were examined under the microscope. Medicinal pyrozone that had been exposed to

light and air in a warm room for ten days caused suspension of movement after one minute. Johnston's ethereal antiseptic soap acted immediately; no motion observed. Alumnol, 10-per-cent. solution, no movement after one minute. Eucalyptus and thymol antiseptic solution, no movement after four minutes. Aluminum aceto tartrate, 5-per-cent. solution, no movement after five minutes.

Some allowance must be made, however, in this test, for varying quantities of microbes and antiseptic solutions. An antiseptic must permeate the albuminous coating of the micro-organism before it can kill; in some of the cultures the micro-organisms were massed together more closely than in others, and hence would take longer time for the antiseptic to act on these, although there seemed to be comparatively little difference in suspension of movement in the individual and massed microbes.

Other tests were made on pure cultures of pus cocci, the staphyloccus pyogenes aureus, one of the most resistant of the pus microbes. This micro-organism is not motile, hence cultures were made in gelatin tubes and a small amount of the antiseptic placed immediately over the culture. This was left but a moment and the tubes set aside. If the culture developed after several days, it indicated that the micro-organisms were not all killed. The result of this experiment was that the micro-organisms began developing on the fifth day after the application of the pyrozones; on the seventh day after the application of the antiseptic soap; on the second day after the application of aceto tartrate of aluminum and alumnol; in one and a half days after the application of eucalyptus and thymol solution.

This experiment showed that these drugs have a growth-hindering effect but do not kill resistant bacteria on short contact.

Further experiments on this same bacteria were made by leaving the various solutions in contact with the cultures for five minutes. The result of this was that after twelve days no growth of the micro-organisms took place. This showed that all of these preparations are good antiseptics if left in contact with germs for a few minutes. Further experiments, as a mixed culture of bacteria taken from a root canal, showed no growth after these drugs had been left in contact with the cultures for five minutes.

As an efficient tonic preparation for patients, Weld's syrup of iron chloride seems to be the best. It is compounded in such a way that it has no injurious effect upon the teeth that the ordinary preparations of iron have.

Coca Cordial is also highly recommended as an efficient and pleasant tonic. It is often advisable for the dentist to prescribe a tonic both prior to and after an operation, and he can do no better than to recommend the above.

SYRUP OF IRON CHLORIDE.—Dr. Harlan, in a paper read before the recent annual convention of the American Dental Association, said: "In all cases where an efficient tonic preparation of iron is to be taken by a patient, the elegant formula of Dr. G. W. Weld is to be preferred to the pharmacopœial preparation so long in use, as it is not injurious to the teeth. Many members of the medical profession are prescribing Dr. Weld's formula, and it becomes our duty to insist, when iron is to be used internally, on the patient taking the non-alcoholic syrup of iron chloride. The dose is one tablespoonful, diluted with three times its volume of cold water. It acts as a diuretic in anæmia, erysipelas, diphtheria, and neuralgia, and in many cases it has no equal as a prompt remedial agent." In commenting upon the paper, Dr. Abbott said: "The preparation of iron prepared by Dr. Weld, of New York, is somewhat peculiar. It is claimed that it is not an acid, and will not affect the teeth; but there is another feature about it. Let it stand in your office for a week or ten days, and you will get a precipitate one-quarter the depth of the bottle. The iron seems to precipitate, and you get comparatively no iron except when you shake it, and then, of course, it is not in perfect solution. Whether that has been overcome I cannot say; but I think it has.* Of course Dr. Weld's preparation is a most valuable one, if what has been said about it be true, because if anything has done injury to teeth it is the chloride of iron. Anæmia always follows that condition of malarial poisoning that we find in malarial districts, and the treatment that is generally prescribed is first quinine, and then the tincture of chloride of iron. It is an excellent preparation as far as the general condition of the system is concerned, and to retain the restorative properties of the preparation that are in the tincture, and still get rid of the bad effect which it has on the teeth, is a wonderful thing to have accomplished, as far

*We are glad to be able to state that this tendency to precipitation, which was at first a defect in the manufacture of Weld's syrup of iron chloride, has been entirely overcome by Messrs. Parke, Davis & Co., and the preparation which this firm has been manufacturing for the past year exhibits no change of the kind upon standing for any length of time.—ED. AGE.

as the welfare of the people is concerned."—Reported in *International Dental Journal*, March, 1893.

LOCAL APPLICATION, PER RECTUM, OF ALOIN, CATHARTIC ACID, COLOCYNTHIN, AND CITRULLIN, AS LAXATIVES.*—Kohlstock has instituted experiments in the clinic of Prof. Senator, at Berlin, respecting the subcutaneous and rectal employment of cathartics. The investigations were confined to four vegetable substances: aloin, cathartic acid from senna, pure colocynthin, and citrullin. Subcutaneous introduction proved extremely painful. The author then essayed with happier results the rectal application of the substances mentioned.

The medicaments were dissolved in the appropriate media, and injected into the bowel with the aid of a glass syringe containing 10 c.c. Aloin and cathartic acid proved to be adapted to the milder cases, colocynthin and citrullin to habitual constipation; aloin is the mildest, citrullin the most energetic agent. The aloin was first applied in a glycerin solution; the quantities of glycerin thus injected simultaneously were, however, too slight to account for the cathartic action. The action, moreover, persisted when subsequently, in accordance with H. Meyer's suggestion, the aloin was dissolved in formamide. The solution employed was of the following composition:

Aloin, 1 gramme.
Formamide, 10 grammes.

A dose of 0.4–0.5 gramme is sufficient to bring about certain results in all cases of mild constipation.

Cathartic acid yields certain results in doses of 0.6 gramme. It is administered as follows:

Acid. cathartinic. e senna, 3 grammes.
Aq. dest., 7 grammes.
Natr. bicarbon., q.s. ad react. alkalin.

For more stubborn and habitual constipation, colocynthin in doses of 0.01–0.04 gramme, as well as citrullin, should come into requisition, the latter acting vigorously in doses of 0.02 gramme even in aggravated constipation. Prescribe:

Colocynthin, 1 gramme.
Alcohol, 12 grammes.
Glycerin, 12 grammes.

Or,

Citrullin, 2 grammes.
Alcohol, 49 grammes.
Glycerin, 49 grammes.

The following properties are common to all these agents when applied per rectum: On the bowel itself they do not produce the slightest irritation, hence the patient is spared the torturing tenesmus which not seldom follows the glycerin clyster. In most cases, passage ensues pleasantly; severe abdominal pains are very rare. The evacuations are very copious, and in this respect materially surpass those produced by injections of glycerin, for glycerin causes depletion of only the lowest portions of the bowel. The agents in question leave behind no tendency to constipation. On prolonged use, indeed, a certain habituation supervenes; at such times, however, a very slight increase of dose suffices. Disturbing collateral effects were not perceived. The urine always remained normal.—*Wiener Med. Presse*, 1892, p. 1886.

INSPECTION OF THEATRES.—The British Medical Journal has made an investigation of some of London's places of amusement, from a sanitary point of view, and publishes the defects as well as the excellences of this class of architecture. It finds, what was to have been expected, that buildings of ancient origin, remodeled for their present rôle, or even those which were thirty or forty years ago constructed as theatres, are deficient both in drainage and ventilation. This, as a general principle, might pass unchallenged and unheeded; but the Journal goes into details with reference to each of the four buildings which it has examined, and recommends interceptory traps in drainage pipes, ventilating shafts over gas-jets in narrow rooms, and the extermination of secluded rubbish within radiating distance of urinals or other chambers.

The danger of disease-diffusion in crowded and inadequately ventilated halls has been, perhaps, even in America, too largely disregarded. Many a case of otherwise unaccountable disease has no doubt originated in an atmosphere which, sheltered from disturbance, has tenderly conveyed from recent convalescents or from other sources to specially susceptible individuals the deadly micro-organism which in the open air would have stood no show at all. To combine a constant aërial renovation with comfortable temperature, is a problem worthy not only of American architects, but of medical officials as well. In Detroit, Michigan, THE AGE may venture to remark, these observations are especially applicable in reference to buildings used for educational purposes.

*Translated from Pharmaceutische Post, p. 1249, 1892.

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Original Articles.

A COLLECTIVE STUDY OF COCILLANA—(GUAREA-SP.)*

Botany and Pharmacognosy by H. H. Rusby, M.D.—Chemistry and Pharmacy by Virgil Coblentz, A.M., Ph.G., Ph.D.—Clinical History and Therapeutics by R. W. Wilcox, M.A., M.D. LL.D.

BOTANY—BY H. H RUSBY, M.D.

So extended already has become our list of therapeutic agents in this most opulent era, that the investigator of our still unexplored resources is almost called upon to present a defense, or at least to offer an apology, on presenting a fresh result of his discovery. Indeed, a very audible cry already proceeds from the less reflective, broad-minded or progressive branch of the profession against any further additions to what to them may perhaps be regarded as an "incubus of knowledge." Nor can I allow the present occasion to pass without saying a word to strengthen the lines of that important department of materia medica to which the present paper forms a humble contribution.

The one fact that materia medica is a science is a sufficient evidence that no power can stay its steady, onward sweep toward completeness; toward a time when the relations of every known substance to physiological and therapeutical effects shall have become formulated. But while this consideration is sufficient to insure the loyalty of the scientific, the investigation of new remedies is not without its attractions for those who are—I will not say more practical, but—more *immediately* practical; that class who demand a prompt return in practical results for every effort which they consent to put forth.

Let such an one ask himself how many cases of disease which nature herself would not bring to a favorable termination, he can by the agency of medicines control. If learned and skillful, he will doubtless claim that the percentage is a large one; but even at the largest, how very many cases remain in which he finds himself helpless to the end? How many the diseases for which we have not a single direct, specific combating agent? Or, how many medicines do we possess which do their work so imperfectly or uncertainly as to leave much to be desired in the direction of finding a similar but superior agent? Do those who fail to appreciate the importance of the search for new remedies reflect that every remedy was once undiscovered, and that it is the same influences which have given us within comparatively recent times such remedies as quinine, ipecac, cocaine, cascara sagrada, belladonna, gelsemium, acetanilid, which now appeal for their sympathy and support that they may succeed in contributing others of equal or of greater importance?

Again, let us question why it is that certain physicians excel in the handling of intractable cases. Because, one replies, they excel in judgment; but judgment is defined as the power by which we make choice, and we cannot choose until we have the objects of choice before us. Our good judgment is made effective only when it is based on broad knowledge, and this knowledge can exist only as a result of discovery.

Looking, upon the other hand, at the field for research, we find in the vegetable kingdom alone, out of its two hundred thousand species, probably twenty-five organisms whose properties have not been investigated at all, for every one which has been so, and we can see no reason why there should not be at least as much of importance to be brought to light as has already been given us.

The mere announcement of a microbe-killer, a pyoktanin or an antikamnia, copyrighted names for mere nonentities, I am not referring to as contributions to this depart-

* Brooklyn Medical Journal, July, 1893.

ment of knowledge. Such are, in some particulars, not above the therapeutical dicta of the middle ages. Breadth of view and liberality of treatment find no room for carelessness in requirement, no excuse for looseness in method. It is their very virtue that they tend toward accuracy of detail and rigor in criticism. And so it happens that in these days of fine specialization, few practical results are reached and verified by a single investigator. Association of forces has become almost a requisite. The mere preliminary announcement of therapeutic properties by no means implies a discovery. It merely indicates a promising field for research, and is construed as an invitation to associate workers to contribute their assistance. If, as in the present instance, the article be a vegetable product, the botanist must first investigate its source, that we may know its position in the plant series and consider its important relations to other members of the vegetable materia medica, and to furnish a means of establishing a base of supplies. The pharmacognosist must then establish the diagnostic characters of the product, as a means of identifying such supplies and estimating their quality. The chemist must determine its constituents, in order that the physiologist can locate so far as possible the properties that he may discover, and indicate to the pharmacist those which are desirable and those which are negative, or perhaps even undesirable. The pharmacist must then study for the preparations which shall most fully and satisfactorily represent the medicinal properties of the drug. Lastly the therapeutist must establish the value of the medicine and the methods of applying it in disease.

In the present instance it has not been possible for the investigation to proceed in this order. No chemist could be found with sufficient leisure and sufficient interest to fully analyze the drug, until it should have been pretty clearly established by clinical trial that it was worthy of this expenditure of time and effort. So for five years we have been limited to investigations which, though careful and accurate, have been unsystematic as to their association. Even now, the results are not so complete as we had hoped to have them for this presentation. The botanical determination of the plant has offered unusual difficulties; and though the conclusion now reached is almost certainly correct, it will require verification by studies in foreign herbaria before it can be published as authoritative. The chemical investigation has suffered some delay from accident, and the analysis is not yet complete. The clinical study is the only one which offers thoroughly satisfactory results, and this not in the direction of the properties of the several constituents, not all of these having yet been isolated. The following is the botanical history of the drug:

It belongs to the natural order *meliaceæ*, a small family of some forty genera and three hundred species, frequent in the warmer parts of Asia and America, a few in tropical Africa. Its only representative in the United States is the *melia azedarach*, or China-tree, sparingly escaped in the Southern States, where it is extensively cultivated as a handsome and fragrant small ornamental tree, the flowers somewhat resembling the lilac of our gardens. The members of this order are all trees or shrubs, a few very small, resembling herbs, but not really so.

From an economic point of view the family is notable because it yields mahogany and various precious mahogany-like woods. It also yields the "red-cedar" of the tropics. This is not the juniperus or red-cedar of our hills, but the cedrela, a totally different plant. It yields the wood which enters into the manufacture of our lead pencils, and in many sections where it grows it is almost the only soft wood available for building and other purposes wherein we use pine.

From a medical standpoint the family is also very interesting because of the numerous medicinal plants which it contains, and especially because these are credited with properties showing a strong degree of uniformity, thus tending to verify and strengthen the conclusions reached. As a general characterization, the medicinal plants of this family may all be placed in the ipecac group. Concerning this very large group I published a study in the New York Medical Journal of Feb. 11, 1893, wherein I reached the conclusion that among them all, those of the *meliaceæ* are the most typically representative of the properties of ipecac. The only one

of this family generally known to scientific medicine is the *azedarach* before mentioned, which, though used as an anthelmintic, possesses distinct emetico-cathartic properties.

Others which are more or less extensively used by the inhabitants of the several countries where they respectively grow, are as follows: The *walsura piscidioides*, of India, used as a fish-poison like *cocculus Indicus*, and a powerful emetico-cathartic poison as applied to man. There are several species of trichilia, which act very similarly indeed to cocillana, and which, by the way, seem to me to be much more closely related botanically to the guareas than is indicated in the grouping given by Messrs. Bentham and Hooker in their great "Genera Plantarum." The *naregamia alata* of India has received the name of "goanese ipecac" because of its very similar properties. It is most interesting that the properties of this plant, so far as can be judged from published descriptions, are almost identical with those of cocillana. Yet it was investigated entirely independently, even without knowledge of the properties or uses of cocillana. It is always a strong point in the case of any group of plants that, investigated independently and in regions remote, they should acquire a repute for the same properties. Lastly, we note that guarea, to which genus belongs cocillana, possesses several species which are credited with more or less similar properties. Two different species, the one of Brazil, the other of Guiana, have received from different authors the name *G. purgans*. This name indicates that these tend rather toward purging than toward nausea, while of cocillana the opposite is true.

Notwithstanding early misconceptions of the botanical nature of this plant, its present reference to this family and genus is correct beyond doubt or question. As to which species of the genus it is, we are unfortunately not so well assured. There are some thirty species in the genus, all South American and West Indian, except perhaps one which is credited to Africa. To indicate the relative diagnostic values of the different structural characters as understood by Casimir De Candolle, who has monographed the South American species in the "Flora of Brazil," I append the following partial analytical key, which, in its main features, represents the ideas of that distinguished botanist:

1	Flowers tetramerous, 1.
	Flowers pentamerous, 2.
1	Ovary hirsute, 3.
	Ovary glabrous, 4.
3	Panicle peduncled, 5.
	Panicle sessile, 6.
5	Panicle much branched, 7.
	Panicle nearly simple, 8.
7	Petals densely silky outside, 9.
	Petals nearly smooth outside, 10.
9	Leaves glabrous both sides, 11.
	Leaves pubescent underneath, 12.
11	Bud oblong, 13.
	Bud ovate, 14.

But Sections 13 and 14 are farther than we can go in the classification of our plant, because its bud is neither oblong nor ovate, but intermediate between the two forms. As regards this classification, I desire to remark that it is very doubtful whether the characteristics which are here treated as fundamental are really possessed of the greater diagnostic value. Those of you who are experienced in systematic botany or zoölogy will appreciate that in different families or genera characters of the same class do not agree as to their possession of a superficial or a fundamental value in classification; and that it is necessary to gain an extensive knowledge of the group before we can decide what amount of reliance to place upon any special class of characters. Regarding guarea we have not yet accumulated this amount of knowledge, and for my own part I regard all present attempts at classification as being tentative merely.

So soon as the reference of the plant to this genus became established, its striking similarity to *G. trichilioides* became apparent, and as there were no external differences sufficient to separate it from that species, and as the minute characters of that species had never been determined, or at least published, it was provisionally regarded as belonging there. Since that time, however, I have

carefully dissected both species and noted structural differences ample, in my opinion, to separate the two. A synopsis of these differences is here presented.

G. trichiloides.	*Species Yielding Castilloa.*
Petiole 3 to 5 cm. long.	Petiole 5 to 8 cm. long.
Panicle nearly as long as the leaf, very loosely and distantly flowered.	Panicle averaging not more than one-third the length of the leaf, in fact but little longer than the petiole, rather densely flowered.
Branches of the panicle shortly but distinctly peduncled.	Branches of the panicle sessile.
Flowers on pedicles of one-third their length.	Flowers not pedicled.
Calyx 3 mm. broad, only one-half as long, the border standing very distant from the narrow base of the corolla tube.	Calyx 2 mm. broad and about equally long, rather closely encircling the broad base of the corolla tube.
Lobes of the calyx semi-circular, or even broader than long, regularly rounded in outline, sometimes 2-dentate.	Lobes of the calyx broadly triangular-ovate, acute.
Corolla-bud oblong, at least the lower two-thirds narrow, not red, more sericeous than in the other.	Corolla-bud ovate or ovate oblong, the lower portion stout, dark red, less sericeous.
Petals 7½ mm. long, the inner surface showing no prominent nerves.	Petals 4½ mm. long, the inner surface showing three strong, dark nerves.
Stamen tube 6½ mm. long, one-third as broad, cylindrical, adnate to the corolla, at least in the bud.	Stamen tube 4 mm. long, one-half as broad, campanulate, always entirely free from corolla.
Anthers longer, and proportionately broader, than in the other.	
Gynobase longer than ovary.	Gynobase and ovary of equal length.
Gynobase and pistil together 8 mm. long.	Gynobase and pistil 4½ mm. long.
Pistil proper 4½ mm. long.	Pistil proper 2½ mm. long.
Style twice as long as the ovary.	Style only two-thirds the length of the ovary.
Fruit globoid, with an indistinct narrowed base.	Fruit pear-shaped, with a conspicuous narrowed base.

It may therefore be taken as established that the plant is not of the species *G. trichiloides*. There are, however, several other species between which and it a distinction is not clearly proven by published descriptions, and of which there are no specimens in this country. Although it is reasonably certain that it is distinct from all those, this question cannot be absolutely pronounced upon until I shall have had an opportunity of making comparisons abroad during the coming summer.

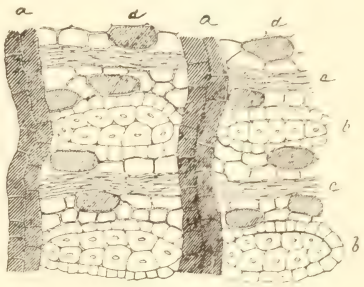
A full botanical description of the plant will read as follows: A tree of some 12 m. in height, broadly branched from near the base, reaching an extreme trunk diameter of nearly 1 m., the ultimate branches erect; wood rather soft, covered with a thick ash-colored bark, which becomes rough only in age; leaves somewhat erect-clustered at the ends of the branches, imparipinnate, 5 to 7 dm. long by 3 to 4 dm. broad, broadly oblong in outline, the petiole 5 to 8 cm. long; leaflets opposite, from seven (rarely so few as five) to ten pairs, short petioled, oblong, somewhat obtuse at each end, entire, 15 to 20 cm. long by 5 to 6 cm. wide, smooth on both sides when mature, principal veins about eleven to fourteen on each side; panicles axillary, once compound, or one or two of the lower branches also compound, 25 to 30 cm. long by 5 to 10 cm. wide at the base, peduncled, the peduncles forming about one-sixth of their length, rather densely flowered for the genus, the branches and flowers sessile; flowers perfectly 4-merous; calyx coriaceous, 2 mm. high and about as broad, rubescent, hoary-tomentose, the lobes broadly triangular-ovate, acute, unequal; corolla in the bud oblong-ovate, slightly angled, rubescent, sericeous upon the outside, apparently never opening except at the apex, near which the petals are apparently circumscissile, the upper portions separating at the line of the summit of the stamen tube; petals 4½ cm. long, thick internally, dark red and smooth, showing three dark veins; stamen tube 4 mm. long, one-half as broad, campanulate, always free from the corolla, thick, strongly, many striate, minutely hoary, slightly 8-crenate; the anthers sessile, alternating with the lobes, oblong, ⅔ mm. long; gynobase blackish, nearly as long and broad as the white silky ovary, the apex broader than the

ovary; gynobase and pistil 4½ mm. long, the pistil proper 2½ mm. long, densely hirsute; ovary 4-celled, the cells apparently 2-ovuled; style two-thirds the length of the ovary; stigma peltate, about as broad as the ovary, above indistinctly 4-grooved; fruit fig-shaped, the narrowed base conspicuous, about 3 mm. long by ½ broader, the main body of the fruit globose, the apex flattened slightly, about 15 mm. broad, about 2 cm. in diameter, apparently indehiscent, not castate nor sulcate, of a rich brown color, somewhat roughened and marked by numerous irregular light-colored spots, texture ligneous.

PHARMACOGNOSY.—BY H. H. RUSBY, M.D.

In accordance with the advice of the natives, only the thicker bark, from the trunks and larger branches, has been collected, and only this is here described. That the natives are correct in their opinion is not certain, but very important clinical results obtained in treatment have resulted from this bark, so that its value is well established. Prof. Joseph Schrenk, now deceased, made the first pharmacognostical examination of the bark, and to his general description there is little to add. His figures, however, failed to exhibit some important characteristics, and I have had new ones drawn for this study.

Bark of low specific gravity, soft and loose in texture; occurring in irregular fragments, varying from 1 dm. or less, to 5 dm. in length, and from 2 to 10 or 12 cm. in breadth; 5 to 15 mm. in thickness, the thickness, at least in the older bark, about equally divided between the corky and the fibrous layers, or the cork a little thicker; outer surface varying from an ashy-gray to a somewhat blackish-gray, and with a tawny or light orange-brown tinge, marked by large silvery-white lichen patches, in which occasionally small bright yellow spots may be seen; deeply, coarsely and irregularly longitudinally fissured and with a few distant and very fine transverse fissures, apparently produced in drying; the corky layer is internally of a deep reddish rust-brown, the transverse section marked by scattered small whitish spots, and its fracture is granular; inner surface dingy yellow, with a light, but distinct, rusty shade, coarsely striate and roughish, with detached broad bands of bast-fibres; fibrous layer yellowish-white, obscurely tangentially yellow striate, its fracture long and coarsely splintery; odor slight but peculiar, a little nauseous, and on strong and prolonged exposure sternutatory; taste slightly bitter and nauseating. For a description of the microscopical appearances, I cannot do better than to quote from Prof. Schrenk, Druggists' Bulletin, 1888, p. 222:



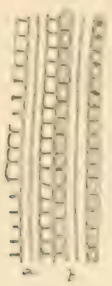
—*Drawn by R. Webber.*

FIG. 1.—Transverse section of Inner Bark: *a a*, medullary rays; *b b*, bundles of bast-fibres surrounded by crystals; *c c*, sieve-tissue; *d d*, large cells containing a peculiar substance.

"On cross and longitudinal sections the periderm is found to consist of one or several layers of primary, and frequently even of secondary bark separated from the deeper, living tissues by broad bands of cork. Large groups of sclerenchyma cells with very much thickened, porous walls are seen in the periderm and the other parts; their number diminishes toward the interior, and in the inner half of the bast portion they are met with only very sparingly.

"The bast-cells are arranged in strictly tangentially elongated groups (as seen on the cross-section), but there are no radial rows, therefore the medullary rays are not so readily distinguished with the unaided eye as in some other barks. They invariably make considerable curves where they enter the zones of cribrose and parenchyma tissue, which alternate with those of the bast-fibres, and as they contain a red-colored substance they can easily be traced under a low power as undulating red lines. On tangential sections they appear very distinct as narrow ellipses made up of from one to three horizontal, and up to twenty vertical rows of cells. Where these rays pass through parenchyma tissue they are frequently bounded by vertically elongated, rather wide cells,

distinguished by the fibrous thickening of their cellulose walls. They form a prosenchyma-like tissue, for in each vertical row of (from five to ten) cells the two terminal ones are pointed.



—Drawn by K. Webber.

FIG. 2.—Two bast-fibres, supported on either side by crystal-sacs; *b*, crystals in place; *a*, crystals removed by hydrochloric acid.

"The bast-cells are slender and straight, at an average of 0.75 mm. in length. Each liber bundle is accompanied by rows of cells with very much thickened, lignified walls, each containing a large calcium-oxalate crystal (of the monoclinic system) entirely filling the interior of the cell, so that when the crystal is removed by the application of hydrochloric acid an exact mold of it is left. So closely are these rows of 'crystal-sacs'* applied to the bast-fibres, that the latter can be brought to view on longitudinal sections only with difficulty. Calcium-oxalate crystals of the same form are also seen in other cells, especially in the proximity of the stone cells. Small, rounded, simple starch-grains are rather abundant in the parenchyma, and in the cells of the medullary rays can be noticed the red-colored masses mentioned above, which are insoluble in alcohol.

"Many of the elongated parenchyma cells of the liber are almost entirely filled with a yellowish-white, amorphous, sometimes slightly granular, substance. It resists alcohol as well as the mineral acids and the alkalies. Even chromic acid, which quickly destroys the walls of the cells containing these masses, so that they float about in the fluid, changes them only slightly, causing them to assume a granular appearance. Osmic acid colors them dark-brown, alcanna tincture red, and Schultze's solution (chloroiodide of zinc) bright orange. Turpentine and chloroform were found to be ready solvents of this substance, so that it might be considered a kind of latex, related, perhaps, to the resinous secretions furnishing gutta-percha and caoutchouc, and the isolated secretory cells may be placed in the class of latex-cells until more thorough investigations give us definite information about their nature.

"I merely throw out the suggestion that some active principle might be contained in this latex, in analogy with opium, euphorbium, jalap, etc.

"A small quantity of the bark was treated with chloroform, which, after evaporation, left behind a yellow, viscous, resinous substance that has the peculiar, but much intensified, odor and taste of the bark. Chemical and pharmacological investigations will be necessary to reveal its nature and determine its medicinal value."

* "Cf. the crystals in the liber of Frangula, Ulmus, Quillaia, etc."

CLINICAL HISTORY AND THERAPEUTICS OF COCILLANA—BY REYNOLD WEBB WILCOX, M.A., M.D., LL.D.

In May of 1889 I commenced a clinical study of this, at that time, new drug. In December of that year I read a paper upon the results of my clinical work before the Academy of Medicine, which was published in the New York Medical Journal of the same month. During the time that I was making my observations, Stewart was pursuing the same line of study. Shortly afterwards Mettler published his paper. The literature, then, is chiefly to be found in the work of Rusby, Stewart, my own paper, and the later papers of Mettler, Eckfeldt, and Shoemaker.

The preparations which I have employed have been a concentrated tincture of the bark, the dose varying from ½ fluidrachm to 2 fluidrachms, administered every two to eight hours; a fluid extract, which I have used in doses of from 5 to 25 minims, every three to six hours, and which I think is preferable, in many cases, to the concentrated tincture on account of the absence of alcohol. Within the past three weeks I have experimented with a syrup which contains all the active principles of the bark except the resin-

oids and possibly a glucoside, if present, which are removed by precipitation by water from an alcoholic solution. The dose of the latter has been 1 to 2 fluidrachms every four to six hours.

The symptoms which are noted when the drug has been given in the crude state, that is, in the form of a powdered bark, are the production of nausea and a desire to vomit, with a metallic taste in the mouth, within about a half-hour after its administration and lasting an hour, the nausea being accompanied by an early discharge of mucus and afterwards by dryness of the throat. These symptoms, so far as the throat is concerned, are not marked after the administration of either the fluid extract or the concentrated tincture. I think that the syrup produces this discharge of mucus, but not to such an extent as the crude drug. Presumably these symptoms are of the same nature as those produced by ipecacuanha, which is locally irritating in that it increases secretion from parotid glands, mucous membrane of the nose, mouth and pharynx. The drug given in any form will sometimes produce a slight headache, rarely slight dizziness, although these symptoms do not appear with any great frequency. There is, with large doses, a desire to defecate, which, however, may be restrained. This symptom is by no means so well marked with the syrup as with the other preparations. From this fact I infer that the resinoids extracted may contain the purgative properties of the drug. There is frequently a slight increase of perspiration; there is a considerable stimulation of vessels and glands, more especially the glands of mucous membrane of the bronchial tubes and of the digestive system. This stimulation, which shows itself by increased secretion, lasts for several hours and is quite likely to be due to the elimination of the drug by way of these tracts. The leading indication for its use is a hyperæmia of mucous membrane unaccompanied by secretion. The cases in which I have used this remedy can be provisionally divided into three classes: those of acute bronchitis, those of subacute and chronic dry bronchitis, and those of chronic disease of pulmonary tissue.

In each one of these three classes of cases, I believe we find a very excellent reason for the use of cocillana in preference to many so-called expectorants. In the first place, I regard it as a valuable substitute for ipecacuanha, and not only a substitute, but a drug that is, in the vast majority of cases, to be preferred to ipecacuanha. So far as I have been able to discover from an extended series of laboratory experiments, with the exception of a very few remedies, the expectorant effect of these remedies is simply an early stage of the emetic effect. In the case of ipecacuanha, the distance between a purely expectorant result and an absolutely emetic result is by no means a long one, and the use of ipecacuanha to obtain one or the other effect is simply a question of dose, and that, too, a dose not defined by hard and fast lines, but depending largely upon the peculiarities and idiosyncrasy of the patient. Now, what is true of ipecacuanha is true of a very large number of drugs of that class. On the other hand, with cocillana the expectorant effect seems to be entirely separate from its purely emetic effect; for, with commencing expectoration, you do not obtain that relaxation of peripheral blood-vessels, that slight perspiration which so frequently accompanies an effective expectorant dose of ipecacuanha. On the other hand, for all that vomiting can be produced by an excessive dose of cocillana, it is only by its injudicious exhibition that we ever obtain this phenomenon, although I am free to say that vomiting, if obtained by cocillana, is extremely persistent, is accompanied by an abominable taste in the mouth, and is thoroughly prostrating; but the difference in doses is so great that these symptoms could only be obtained by the greatest carelessness. With the syrup which I have been using of late, a decided expectorant effect can be obtained with 1 to 2 drachms; emesis was only produced when 2 ounces had been taken at a single dose.

As compared with the action of apomorphine, I believe cocillana presents certain advantages. The experiments that have been performed by many observers, including myself, show that expectoration in rabbits and cats follows uniformly the administration of a dose of apomorphine; the trachea, when opened half an hour after a hypodermatic injection of this remedy, is found to be filled

with frothy mucus; the mucous membrane is seen to be pale, the blood-vessels hardly visible. On the other hand, with cocillana, the expectoration, although not quite so profuse, is a trifle more viscid; and it seems fair to conclude that while apomorphine depletes the blood-vessels and removes serum from submucous tissues, cocillana stimulates the muciparous glands to action. There is a difference in time also, apomorphine acting within a half to one hour, cocillana being somewhat more slow, three to six hours being usually required. The expectorant effect of apomorphine passes off within two or three hours at the outside, thus necessitating frequent doses; while expectoration once established by cocillana, persists usually for from four to six hours, the longer intervals of administration for cocillana being a decided advantage; and so far as the expectoration goes, the teasing cough and the sense of stuffiness are, I believe, better relieved by cocillana with its somewhat thicker expectoration, than by apomorphine with its purely watery secretion. So, in cases of acute bronchitis that are seen before forty-eight hours of the disease have elapsed, apomorphine will relieve more quickly; but in cases seen for the first time at a late period, I would prefer cocillana. I have not found that the rhythm of the respiratory act was affected, only so far as freer expectoration lowers the respiratory rate. That the expectorant effect of cocillana is not the first stage of nausea, is shown by the fact that an increase of appetite is usually observed even under full physiological doses, and, contrary to what we find with ipecacuanha, there is no change in the fullness of the pulse. In cases of acute bronchitis, also, the laxative effect of cocillana is valuable.

In cases of chronic bronchitis, especially of the dry variety, I believe we find a larger field for the use of cocillana. Its expectorant effect is certainly surer than that of either apomorphine or ipecacuanha in liquefying bronchial mucus. It is better for continued administration because it increases the appetite, not because the drug itself acts like a simple bitter or its menstruum (alcohol) irritates the stomach, for the fluid extract and syrup are equally reliable in that direction, but because the drug is, as I have said before, a laxative, probably from stimulation of the intestinal muciparous glands. The increased number of movements of the bowels are not characterized by pain or tormina, but are simply movements increased in amount and of greater fluidity. The laxative effect of the syrup is by no means marked as compared with that of the concentrated tincture or the fluid extract. The expectoration is not so much influenced by warm diluent drinks as is that of apomorphine, ipecacuanha, or carbonate of ammonia, although the drug itself may produce a slight perspiration. In chronic bronchitis with viscid expectoration, cocillana will render the sputum liquid somewhat more surely than ipecacuanha, and it has the further advantage of not causing nausea. After continued use it seems to check the formation of mucus, either from sedation of the muciparous glands through over-stimulation, or, from more rapid expectoration, opportunity for decomposition is prevented and its irritating properties thus are not acquired. However, in cases of senile bronchitis, particularly in cases of calcified costal cartilages, it may so markedly add to the bronchorrhœa that it becomes absolutely dangerous, and particularly because it is not a stimulant to the respiratory centre like belladonna and strychnine. It is, however, just to say that a recent observer believes it to be a respiratory stimulant as well, although I have never been able to satisfy myself that such is the case. In these cases, then, it is useful only so far as it liquefies secretion. Although this is a limitation in the field of its usefulness, it is not one that we need deeply regret, because in a case like this, and especially where we have a dilated right heart, we get such brilliant results from a combination of strychnia and carbonate of ammonia.

In cases of chronic disease of pulmonary tissue, cocillana has almost its own use in liquefying secretion and relieving the acute exacerbations of the associated chronic bronchitis. Since the use of this remedy is likely to be persisted in for a number of months, its effect npon the appetite and upon the bowels should cause it to be preferred to any of the ordinarily used drugs. The cough and expectoration diminish, probably for the reasons given above, and, as a consequence of

removal of the opportunity for auto-infection, night sweats are likely to diminish.

In order to get the best effect from cocillana, a careful diagnosis is necessary, and, indeed, a diagnosis based to a considerable extent upon physical signs; for when the cough is due to pleuritic exudation, or is laryngeal or pharyngeal, cocillana, in common with all other expectorants, will fail.

In conclusion, I believe cocillana to be superior to apomorphine, except in cases of acute bronchitis when taken within the first forty-eight hours. It is certainly preferable to ipecacuanha, in that it does not so readily cause nausea and a metallic taste in the mouth, and that it improves the appetite and assists in the regular movement of the bowels. It must yield to carbonate of ammonia in chronic senile bronchitis, although the heart-beat and the pulse become stronger under its use; and it cannot stimulate the respiratory centre as strychnine does. It is immeasurably safer in any stage of acute bronchitis than pilocarpine, because it does not depress the heart action. I believe it can fully replace ipecacuanha, which is now becoming expensive from exhaustion of the supply, in every sphere of action, and in a very large number of cases it can be substituted with advantage for apomorphine, carbonate of ammonia, strychnine, and other drugs classed with more or less reason as expectorants. In the four years which have elapsed since my studies of cocillana commenced, I have formed a more and more favorable opinion of the value of this drug in the class of cases which are specified above. I am firmly of the opinion—and this is based upon the study of a large number of cases of diseases of the respiratory organs that come under my observation in public service—that cocillana is a remedy that will be received with lasting favor by the medical profession.

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Discussion.

Dr. R. W. Wilcox: I wish to say first, Mr. Chairman, that I appreciate very highly the honor of addressing this Society, for as a student of medical literature I am familiar with the work done in this City of Churches. I appreciate your work for the Society in the Brooklyn Medical Journal; and beyond the interest that a practical man has in it, I feel that the work that is being done in that Journal in the way of acquainting the younger members of the profession with the Fathers, is one that should be emulated by all our medical writers.

Dr. Eccles: I am sorry Prof. Coblentz is not here. I was anxious to hear his report on the chemistry of the subject, and as he has not come I thought Dr. Rusby would give us that. I understand Prof. Coblentz has discovered two resins, the red and the white.

Dr. Rusby: The red resin is not regarded as a discovery. It is a resinous substance which is precipitated as a fluid extract on the addition of water. An alkali does not dissolve it. In addition to this he has found crystals which possess to a certain extent the characteristic taste and odor; he has also an oleo-resin which more markedly possesses the characteristics of the drug. These he had not purified when I saw him. Prof. Coblentz was ill two or three days last week, and I was also sick and only saw him for a few moments to-day; that is the reason I am not able to answer the question more fully. He finds also evidences of a glucoside.

Dr. Eccles: On Feb. 25th I was first informed that Dr. Rusby was going to present this paper, and immediately proceeded to examine chemically some extract of cocillana. Only a small amount was in my possession. Part of it was used as an expectorant, and in the few cases tried it seemed to work like a charm, relieving ordinary cough and acute bronchial troubles. In the matter of its chemistry, duty compelled me to desist from work before much had been done. I, however, succeeded in discovering a few points of interest. The white resin I failed to isolate, but saw it was there by the action of the reagents. The red resin in combination with the white resin, in fact the entire resinous mass, exclusive of a substance to be spoken of hereafter, is in the bottom of this beaker. The peculiar odor of the cocillana can be recognized therein. An alkaloid was found having some distinctive properties. It is of a light straw-yellow color, so far as pro-

cured in a nearly pure state. It appears, very likely, in connection with some organic acid. The isolation of the acid would be difficult, and I had no time to undertake it. A hydrochloride of the alkaloid was produced, and found, like its base, to be somewhat resinous in appearance, but could not be crystallized. Several attempts were made, but each failed. It is insoluble as an alkaloid in water. The hydrochloride is soluble in water, and quite so in acid solutions. These solutions are precipitated in dense flocculent masses by Mayer's reagent. It is also precipitated by solutions of tannic acid and of sodium molybdate. The color reaction with strong hydrochloric acid is negative; neither is there any color with strong nitric acid. Sulphuric acid gives a brown color, shading to red. With sulphuric acid and sugar there was no change from that of sulphuric acid alone, neither did bichromate of potash alter it. The only color reaction was that of the straight sulphuric acid. I intend to see whether it resembles emetine, by trying it with chloride of lime. As the drug is somewhat related to ipecac, it might give a similar color reaction. The name I suggest to-night for the new alkaloid is "rusbyine." It is customary to give the first alkaloid found in a plant the name of either its species or genus. I believe that this species has been named "rusbyi" by Dr. Britton. I think it will therefore be proper to call the alkaloid "rusbyine." What other constituents the plant may contain I cannot say, not being able to go any further with the work. This is the first mention of the existence of this alkaloid that has been made, and the Brooklyn Medical Journal will give the first account of its discovery. It had the first report of the alkaloid calycanthine, which I found a few years ago. On the edge of this evaporating-basin you will see a small amount of this latest alkaloid.

Dr. Raymond: Mr. President, is this drug obtainable in the drug stores ordinarily?

Dr. Eccles: Quite a number of them keep the fluid extract.

Dr. Kent: I would like to ask Dr. Wilcox if any experiments have been made with the hypodermatic injection—whether systemic effects would be produced by throwing it into the circulation, other than by the stomach.

Dr. Wilcox: No attempt has been made in that direction—for this reason, that the different principles had not, at the time my earlier experiments were made, been isolated, and we were waiting for the chemist to catch up with the therapeutist. Now it is in order for the therapeutist to make a little more definite statement in regard to it. We have gone a step further of late and separated the expectorant properties from the emetic and purgative, and now very shortly we will be able to say how far the new alkaloid represents the expectorant and emetic properties of the drug.

The President: Is there any gentleman present who has used the drug?

Dr. Macumber: I am reluctant to make any remarks, but I have used the drug somewhat. I used Parke, Davis & Co.'s fluid extract, in doses of 15 to 20 drops every four hours, and I found it a very useful expectorant in subacute and chronic bronchial troubles. It establishes secretion in a short time, and the secretion is usually very healthy in appearance.

Dr. Rusby: I have nothing further to say, Mr. President, except to mention an idea in regard to the physiological effects of the drug so far as the production of mucus is concerned. The inhalation of the dust produces sneezing and irritation and very much the same symptoms as the inhalation of the dust of ipecac. This suggested to me the thought that possibly the local application of some fluid preparation of the drug in the form of a spray to the throat would be found useful by the laryngologists.

Dr. Kent: I would like to inquire whether after large doses of this drug the stools exhibit any such characteristics as we see after ipecac; what is the effect in that respect?

Dr. Wilcox: The only differences I have noticed in the stools are those mentioned in the paper, namely, that they are larger in amount and more fluid than ordinary stools. I have noticed no change in the color, or anything unusual in the odor, other than arises from increased peristalsis. The drug stimulates the muciparous glands of the intestines to action, causing the stools to be larger and

more fluid. Beyond that I have nothing which I could state definitely.

When used as an expectorant the following is the form of prescription:

Extracti cocillanæ fluidi,
Extracti lippiæ Mexicanæ fl., ääʒ ss.
S.: Thirty drops in wineglass of water every four to six hours.

EXAMINATION OF COCILLANA — BY VIRGIL COBLENTZ, A.M., PH.G., PH.D.

Five hundred grammes dry, finely pulverized drug was exhausted with hot benzol until it yielded no further residue. From this extraction, most of the benzol was recovered by distillation, the syrupy product transferred to an Erlenmeyer flask and evaporated at a gentle heat till it ceased to lose weight and benzol was removed.

Benzol Extract 24.95 Grammes.

This extract was of greenish-gray color; while still in flask it was connected with well cooled condenser, placed on boiling water bath, some water (acidulated with tartaric acid) added, and then steam was blown through the flask as long as the distillate contained any oily globules. At conclusion of distillation the condenser was found to be incrusted with crystalline masses; these were washed out and recovered from it, as well as the distillate; further portions were recovered on extraction with ether.

This white crystalline body was recrystallized from alcohol several times, yielding hexagonal plates (0.65 gramme). This substance is very soluble in ether, chloroform, alcohol, ligroin, acetic ether, glacial acetic acid, insoluble in alkalies; acids gave no color reactions. Heated with water it melts to oily globules which congeal on cooling; has peculiar aromatic taste. After drying over phosphoric oxide it melted at 80° C. sharp. When heated above this temperature it sublimes, yielding white flaky crystals. From its deportment this body belongs to the so-called "camphor-like" bodies, or more properly, solid hydrocarbons, such being peculiar to the phlox species. A further examination of this body will be made in the future.

The aqueous acid distillate after removal of the hydrocarbon, was tested for alkaloids with Mayer's and other reagents, indicating presence of traces. The precipitate produced by Mayer's reagent was collected and reserved for further use.

The residue in the retort after distillation, freed from water, weighed 24.3 grammes; was a pale greenish, brittle, resinous mass. This was dissolved in small quantity of chloroform, and then poured into large excess of alcohol with constant stirring; a white resinous powder precipitated, leaving the alcohol of pale greenish color; the resin was filtered off and washed with alcohol to remove adhering oil. For further purification the resin was again dissolved in small amount of chloroform and precipitated in alcohol. The alcoholic solutions on evaporation yielded 12.5 grammes of a greenish-yellow fixed oil. This fixed oil had a pungent, acrid taste and earthy-like odor; soluble in ether, chloroform, alcohol, turpentine, etc.; left a permanent greasy stain on paper; saponified readily with weak soda. With nitrous acid yielded elaidin. It is, therefore, a non-drying fixed oil.

The resin obtained as above (11.8 grammes) was a white impalpable powder, melting at 122° C. to clear yellow liquid. This resin on melting and cooling leaves a transparent brittle mass of pale straw color, tasteless, inodorous, soluble in chloroform, ether or turpentine, insoluble in alcohol, dilute alcohol, boiling aqueous caustic potash, soluble in large excess of boiling alcoholic potash, reprecipitated again on addition of an acid. No action in cold by any of the acids; on prolonged boiling with nitric acid remained unaffected. Fusing with caustic potash produced no action. From its reactions it might be classed as an indifferent resin.

80-per-cent. Alcoholic Extract.

Complete exhaustion yielded 9.4 grammes dry extract. This on treatment with absolute alcohol left behind 2.7 grammes insoluble residue consisting of caoutchouc and gummy matter.

The alcoholic extract was concentrated to small bulk and poured into excess of ether, agitating, then allowed to deposit insoluble portion; the ether having become clear was

decanted, and the precipitated mass well washed with ether.

Insoluble in Ether.

The brown-colored extract was dissolved in water and precipitated with subacetate of lead. The precipitate was suspended in water, and lead removed with H_2S, filtered and heated; this solution gave greenish-black coloration with ferric chloride, precipitated with solution of gelatin, and reduced ammoniacal silver nitrate, indicating the presence of a tannin-like principle; from the reactions obtained there can be but very small amount present, hence no estimation was made. This same solution also readily reduced Fehling's solution and the Bismuth test solution on warming. The filtrate from lead precipitate was freed from excess of lead, heated to remove H_2S, this showed the presence of glucose by Fehling's and Bismuth test.

The above solutions were tested for alkaloids with negative results.

Soluble in Ether.

An alcoholic solution of this extract is poured into water acidulated with HCl, yielding a brownish resinous precipitate. This is filtered off and well washed. This resin (0.8 gramme) is readily soluble in ether, chloroform, benzol, alcohol, dilute NH_3, precipitated by acids, of intense bitter acrid taste reminding one of the taste of the crude drug.

The acid filtrate, which is of deep red color with greenish fluorescence, was shaken with ether, chloroform, and benzol without yielding any appreciable residue; it was then made alkaline with ammonia (alkali intensifies the color) and again shaken with several portions of ether, yielding on evaporation an impure residue, which on resolution in acidulated water and reprecipitation yielded 0.012 gramme residue, which possessed many characteristics of an alkaloid. With the amount obtained from the benzol extract gave 0.014 gramme. The usual alkaloidal reagents, as Mayer's, Lugol's, potassio-cadmic iodide, auric and platinic chloride, tannic acid, picric acid, all gave distinct reactions. With picric acid, microscopic crystals were obtained, but all other salts refused to crystallize. The quantity being too small precluded a test for nitrogen, so at present we will call it an alkaloid.

It was presumed a larger yield might be obtained from the plant direct, by exhaustion with alcohol acidulated with tartaric acid, evaporating, treating with water, removing color and extractive with ether, then making alkaline and exhausting with ether. The alkaloidal residue purified gave me 0.015 gramme amorphous alkaloid, from 500 grammes drug.

I hope in future, by working with larger amounts of the drug, to obtain sufficient quantity of this principle to identify it definitely and give something about its composition and properties.

The highly colored alkaline liquid remaining after the extraction of the alkaloid, was concentrated on water bath. During the evaporation deep-crimson colored drops condensed on sides of beaker; the liquid was transferred to small flask and distilled. The first few c. c. were of crimson color, unaffected by acids and intensified by alkalies; could not abstract it by means of any volatile solvent; on evaporation in open air it was entirely dissipated. The solid extract remaining on treatment with alcohol to remove salts consisted of inert extractive.

Distilled Water Extract.

Yielded 5.76 per cent. aqueous extract, consisting of starch, mucilage, dextrin, glucose.

Dilute Soda (0.2 per cent.).

Yielded 3.21 per cent. extract, consisting of albuminoids and extractive.

Dilute Hydrochloric Acid.

Extract 1.1 per cent. containing extractive and calcium oxalate.

Lignin 5.84 per cent. Ash 2.65 per cent. Residue.

Quantitative estimation was made of only those constituents which are of importance among plant products, which are likely to play a part in their medicinal value.

The balance of the constituents, as starch, mucilage, albuminoids, extractives, etc., are common to most plants and are of no interest or value.

Summary.

	Per Cent.
Benzol ext.	4.99
Solid hydrocarbon	0.13
Fixed oil	2.50
Resin	2.36
80-per-cent. alcoholic ext.	1.88
Resin, 0.16 per cent., alkaloid, tannin, glucose.	
Distilled water ext.	5.76
Starch, mucilage, dextrin, glucose.	
Dilute soda	3.21
Extractive, albuminoids.	
Dilute hydrochloric acid	1.10
Extractive, calcium oxalate.	
Lignin	5.84
Ash	2.65
Moisture	9.72
Residue	64.85
	100.00

SUCROL: A HARMLESS SUBSTANCE OF DELICIOUSLY SWEET TASTE.*

BY DR. HEINRICH PASCHKIS.

In 1884, Dr. Berlinerblau published his report about the formation of paraphenetol-carbamide. This body is easily produced by adding a solution of potassium cyanate to muriate of amidophenetol.

$$C_6H_4{<}^{OC_2H_5}_{NH_2}\cdot HCl + CNOK = KCl + CO{<}^{NH_2}_{N\,H\,C_6H_4OC_2H_5}$$

It is easily crystallizable in small white tables having a melting-point of 160° C. (320 F.). It is soluble in alcohol and ether and in hot muriatic acid, also in hot acetic acid, as well as in all the solvents usually employed; diluted alkalies or acids do not act on it. Its solubility in water appears from the table given below:

100 c.c. of	water at	20° C.	will dissolve	0.16	gm.
100 "	"	30° C.	"	0.216	"
100 "	"	40° C.	"	0.38	"
100 "	"	50° C.	"	0.48	"
100 "	"	60° C.	"	0.52	"
100 "	"	70° C.	"	0.60	"
100 "	"	80° C.	"	0.65	"

Paraphenetol-carbamide has a persistent sweet taste, and seemed to be especially appropriate to replace sugar.

To be able to make definite statements in this respect, it was necessary to make some experiments with this body, which has been given the commercial name: *Sucrol.*

I had to deal with three samples for this purpose. One was a snow-white, dusty powder; another consisted of quite large and transparent yellowish-white crystals; while the third came in the shape of fine, small, glittering needle-shaped crystals. The two first named I had received from the works of Dr. F. von Heyden's successors, while the third was from Dr. Berlinerblau. All these preparations had been produced by some patented process from phosgen and para-amidophenetol. The first of these samples, the powder, which is a precipitate, is quite difficult to moisten, and therefore very slowly soluble; the other two, the small fine crystals especially, can be very easily moistened and are quickly soluble. If all the samples are dissolved in hot water, they appear in large, fine needles on cooling.

The absolute harmlessness of *Sucrol* I established by experiments on warm- as well as on cold-blooded animals. There was no effect visible either on internal or on subcutaneous application. Rabbits and dogs could easily stand a daily dose of 1 gramme (15 grains) and more. Its subcutaneous application was not easily accomplished, since Sucrol is soluble only in very small quantities; but there was no local trouble nor any other general effect produced by injecting an emulsion containing from 0.2 to 0.3 gramme (3 to 4½ grains) subcutaneously. No action was noticed on the circulation, on respiration, or on the central nervous system. In dogs who were fed with Sucrol for many weeks, no general effects could be observed. Thus, a dog weighing 5,800 grammes (12¾ lbs.) was given Sucrol for five weeks and did not lose weight. This dog, as well as others fed in the same manner at the same time, had a normal appetite; they were given in addition to their usual fare 0.1–0.5 gramme (1½ to 7½ grains) of Sucrol every day. The latter was placed between two slices of sausage; when, by mistake, 1 gramme (15 grains) had been given several times a day, some of the animals vomited the sausage. But they immediately swallowed their vomit again, which goes far to prove that the drug itself was not causing disgust.

* Published in the Therapeutishe Blätter, Vienna, March 26, 1893.

I next instituted experiments with various digestive fluids.

I.—Filtered *Saliva* was mixed with Sucrol in various proportions. Each test-tube contained 10 c.c. (2 dr. 2 scr.) of saliva and:

	Per cent. Sucrol.
No. 0	None.
No. 1	0.05
No. 2	0.1
No. 3	0.5
No. 4	1

One c.c. (15 grains) of a thin starch solution was then added to each. After two minutes all the starch was converted into sugar: the solutions responded to Fehling's test, reducing the copper promptly.

II.—*Pancreas.* A freshly made infusion of an ox's pancreas was mixed with Sucrol in various proportions. Each test-tube contained 20 c.c. (5 dr. 1 scr.) of this infusion and:

	Per cent. Sucrol.
No. 0	None.
No. 1	0.05
No. 2	0.1
No. 3	0.15
No. 4	0.2
No. 5	0.5

Again, 2 c.c. (30 grains) of solution of starch was added to each, and the temperature kept up at 40° C. (104° F.). Three minutes later the contents of every test-tube in the series would respond to Fehling's test, reducing the copper without delay.

At the same time a second series of test-fluids of the same concentration were mixed with boiled egg-albumin. This was done in the form of circular slices, having a diameter of 4.5 mm. (0.175 in.) and a thickness of 1 mm. (0.038 in.). After five hours these slices were swelled up to equal proportions in each and every one of the test-tubes; in twenty-four hours they had all disintegrated into small, transparent flocculi.

III.—*Pepsin.* The liquid used for these experiments was prepared by digesting pieces of the gastric mucous membrane of the hog in muriatic acid. Each test-tube contained 20 c.c. (5 dr. 1 scr.) of this fluid and:

	Per cent. Sucrol.
No. 0	None.
No. 1	0.05
No. 2	0.1
No. 3	0.25
No. 4	0.5
No. 5	1

The same slices of egg-albumin were added to each of these at a temperature of 40° C. (104° F.). Four hours later these pieces were dissolved in Nos. 0 and 1, changed to a small floccule in Nos. 2 and 3, and to a thin slice in the others. After another ten hours they were all completely dissolved.

Another experiment, analogous to the previous one, was made with Denaeyer's *Pepsinum officinale* and $4\frac{0}{00}$ per cent. muriatic acid. Sucrol was added in the same proportion to an equal number of test-tubes. Here the albumin was in the same manner dissolved after four hours in Nos. 0 and 1 and changed to thin transparent slices in the others, and all completely dissolved after ten additional hours.

From these experiments it is evident that digestion is not at all impaired by the presence of comparatively large quantities of Sucrol, a fact which was rendered very probable by the excellent digestion and nutrition of the animals fed with it.

In regard to its possible use as a condiment in the preparation of food, additional experiments were made as follows:

IV.—*Yeast.* A 2-per-cent. solution of grape-sugar was used, one portion without Sucrol while to the other as much was added as would dissolve at a temperature of 30° C. (86° F.), *i.e.*, a little over 0.2 per cent. Each portion was filled into a test-tube, mercury-sealed according to F. Moriz, after having been mixed with yeast stirred up in water. The temperature being 30° C. (86° F.), fermentation set in, and in both an equal volume of carbonic acid gas showed after one hour. A second experiment, analogous to the first, showed this difference: Fermentation in the test-tube containing Sucrol began within fifteen minutes, while in the other it did not begin until after twenty-five minutes had elapsed. The development of gas in the first tube was therefore much greater during the next two hours.

Other experiments gave results exactly like the first one. The addition of large quantities of Sucrol (which remained undissolved) did not show any effect on the beginning and course of the fermentation.

V.—*Emulsion.* A 3-per-cent. solution of amygdalin was used; to one portion was

added 0.1 per cent. of Sucrol, to another 0.2 per cent., and to a third 0.5 per cent., while a fourth contained no Sucrol; an emulsion of almonds was then added to each. At a temperature of 30° C. (86° F.) the portion containing no Sucrol gave off an odor of hydrocyanic acid within ten minutes; with the others this was deferred a little longer, *i.e.*, twelve minutes; with the one containing 0.5 per cent. (insoluble) it was still more retarded, not appearing before fifteen minutes. But there was chemical action in every case.

Lastly, I have made experiments with Sucrol and milk, similar to those I had made with saccharin.

VI.—*Milk.* Fresh, unskimmed milk was used, and 50 c.c. (1 oz. 5 dr. 1 scr.) put in each test-tube. Then Sucrol was added.

	Per cent. Sucrol.
No. 0	None.
No. 1	0.1
No. 2	0.2
No. 3	0.3
No. 4	0.5
No. 5	1

After forty-eight hours Nos. 0 and 1 were strongly acid, Nos. 2, 3, 4 equally, and No. 5 very little acid; after another forty-eight hours the milk in all the test-tubes was coagulated. (The temperature of the air was quite low at the time.)

In a second series boiled milk was used; previously the milk had been mixed with Sucrol in this manner:

	Per cent. Sucrol.
No. 0	None.
No. 1	0.2
No. 2	0.4
No. 3	1

After two days No. 0 was acid, the others were mildly acid, but none had coagulated. After three more days No. 0 had coagulated, but not the others—they still showed a weak acid reaction. They gradually dried up by evaporation, but, as I found by other experiments, they would immediately coagulate on the addition of acetic acid; the same took place with fresh milk containing Sucrol. Thus it was evident that milk with Sucrol can, without damage to the former, be easily condensed by evaporation; experiments have established this fact. Coagulation of fresh milk is in no way interfered with by Sucrol, and that of boiled milk is at least not accelerated.

Coagulation of milk by means of rennet is as little interfered with by the addition of Sucrol. That boiled milk does not become acid after the addition of Sucrol, is evidently due to the previous boiling. Still, I thought for a moment of the possibility that Sucrol, as a derivative of one of the aromatic series, might have an antizymotic or antifermentative action, although its indifferent action on fermentation did not speak in favor of this. I, therefore, next investigated the relation of Sucrol to *decomposition.*

The pancreas of a hog was finely chopped up and divided into two equal portions; to one was added 0.5 gramme (7½ grains) of Sucrol, and then each portion was mixed thoroughly by stirring with a little cold water. The portion containing no Sucrol began to decompose within a few hours at an ordinary temperature, while the other held out a full day and even then the odor developed was not a foul one, but only disagreeably acid; its reaction was strongly acid, while the first portion showed an alkaline reaction. On the second day there was no appreciable difference between the two portions; both decomposition and development of gases were pretty far advanced. I cannot explain a fact which came to pass during a second experiment: that beef-bouillon as well as urine decomposed on addition of Sucrol just as quickly as without it.

In the same manner Sucrol proved to be no preventive of the development of microorganisms. Solutions of Sucrol in agar-agar were made; on cooling, the solution (which, by the way, incorporated considerable quantities of the drug) remained perfectly clear and transparent; then to one portion cultures of the *bacterium coli* were transferred, and to another cultures of the *streptococcus pyogenes.* Although the tubes were kept at an ordinary temperature, the growth of the fungi proved to have been attained the next day, and the vegetation increased considerably as soon as a temperature of from 30° to 35° C. (86° to 95° F.) had been employed for a short time.

As has been previously stated, Sucrol appears to be as inactive to the general system as it is in relation to the various pro-

cesses connected with digestion. It was already mentioned that it does not exercise any influence on circulation, respiration, nutrition, and digestion. The same is true for the secretion of the kidneys. The urine which is voided after the long-continued use of this sweet body is normal and does not show any change of color. Still, I would not venture to contend that Sucrol passes through the body unchanged; I am rather of the opinion that it is, in part at least, decomposed in the system. Traces of it are to be found in the urine only when comparatively large doses (0.5 gramme [7½ grains] and more) have been exhibited. It has been found that 60 per cent. of the Sucrol ingested reappears in the urine, 5 to 6 per cent. in the fæces, while the rest is probably oxidized in the blood directly. I used a test for its presence which has been advised by Dr. Berlinerblau.

A small quantity of this substance is mixed with two to three drops of pure carbolic acid and the same quantity of pure concentrated sulphuric acid, and heated to boiling for a short time. After cooling, a syrupy liquid of reddish or even red color remains; this is poured into a test-tube half full of water, and well mixed with it. When thoroughly cooled, it is either poured on caustic soda solution, or caustic ammonia solution is poured on it very carefully to avoid mixing. At the border of both liquids a ring of blue color is formed which gradually grows more and more intense. It lasts for several hours and gradually embraces the whole of the caustic solutions, the soda showing a slightly purple tint, while that of the ammonia has a cerulean hue. The test is very prompt, and if the solution is not very dilute it can be used directly—if it is, it must first be extracted by shaking it up with ether. Even with *urine* containing Sucrol the test shows excellently; if made with great care, it has been more successful with native urine than if I had shaken up the urine with ether and used the sediment remaining after the evaporation of the ether for the test. A number of colored as well as coloring matters are taken up from the urine by the ether, and they are liable to mask the color-reaction if sufficient care is not exercised. I have so far not succeeded to get well-formed crystals of Sucrol from urine. As to the solution used for the test with urine, I prefer ammonia. The test with it is more certain; the cerulean color is more distinct and can be more easily perceived, even in the presence of other colored matter, than the purple hue caused by the soda solution.

In conclusion, I will say a few words about the *use* of Sucrol.

As it is absolutely innocuous and does not attack the digestive organs of either man or animals, a fact which I can prove by my own testimony and that of others, its use is absolutely unobjectionable. It certainly cannot be considered a real substitute for sugar.

Sugar is a carbohydrate, and therefore plays an important part in the nutrition of man; it has in this respect no rival among the sweetening substances so far discovered.* On the other hand, it cannot be denied that Sucrol fully accomplishes one object for which sugar is used, viz., that of sweetening food and drinks. It has a pure sweet taste, has no disagreeable taste accompanying or following its use, and does not spoil the food to which it is added. I have had puddings and preserves prepared with Sucrol and have had people eat of them who did not know of the fact, and I have eaten of them myself; I have never heard of any complaint, even after I had revealed the true state of things.† Coffee, tea, and lemonade that were sweetened with Sucrol, tasted very good; their sweet taste never becomes disgusting or sickening. Sucrol is best used for sweetening such liquids as have a comparatively high specific gravity. Those that are lighter or rather thinner and have a somewhat bitter taste, will not have this bitter taste covered by Sucrol, on account of their want of viscosity and the small quantity of Sucrol necessary for sweetening. Something similar is known to be a fact with sugar; a purely bitter taste will not even be neutralized by

* This is not the case with *Diabetine* (levulose), which is a nourishing substance.

† Prof. Dr. Kossel has fed dogs for months with Sucrol, giving 0.1 gramme per 1 kilo (¼ grain per 1 lb.), without any disagreeable effects. Prof. Dr. Ewald has given the preparation to healthy and sick people, and has found that the taste of the condiment was very much liked. During these long-continued experiments with man no disagreeable effects have ever been noticed.—*Pharm. Zeitung*, April 19, 1893.

much sugar (*e. g.*, quinine), it is only combined with the sweet. How much sweeter Sucrol tastes than sugar, cannot be stated exactly; according to my gustatory experiences with aqueous solutions and with various foods and drinks, I believe it is about 200 times as sweet as sugar, may be more. At all events, the quantity of Sucrol necessary to sweeten a liquid is much too small to give the latter the same density it possesses when sugar is employed. This shows most markedly in tea or coffee.

Aside from a pronounced sweetishness, the peculiar slightly bitter taste of tea is clearly perceived, while coffee (especially when prepared in Turkish style) is made perfectly and purely sweet. If milk is used with these beverages, they are rendered easily and perfectly sweet by the addition of Sucrol.

It appears to me to be an advantage that in liquids of an aromatic and specific taste, especially in tea, the characteristic taste is fully present together with the sweetness; while, as every tea-drinker knows, the former is partly covered up by larger quantities of sugar. Similar relations take place in regard to wine and liquids which have been rendered aromatic by ethereal oils.

There is slight difficulty in the use of the powdered preparation, *i.e.*, it is not easy to wet it; but this is *absolutely absent* if it is used *in the shape of fine crystals.* To sweeten the liquids heretofore spoken of, it is best to pour them hot on the Sucrol in the cup.

With medicines Sucrol plays a similar part. In those of a pronounced bitter taste, the latter cannot be covered up with it, any more than with sugar. A solution containing 1.0 gramme (15 grains) of sulphate of quinine, 6 drops of sulphuric acid, 100.0 grammes (3 ounces 3 drachms) of water and 0.1 gramme (1⅔ grains) of Sucrol, tastes intensely bitter, as well as acid and sweet at the same time. In a powder containing 0.05 gramme (1 grain) of the muriate of morphia, 2.5 grammes (2 scruples) of starch, and 0.05 gramme (1 grain) of Sucrol, the bitter taste is covered up as well as, if not better than, it is by sugar.

It is self-evident that in those powders where sugar forms a constituent at the same time, an indifferent substance has to be substituted if Sucrol is to be used for sweetening.

From the foregoing the following conclusions may be derived:

Sucrol is a condiment which has an agreeable and intensely pure sweet taste. As it does not produce any disturbances in the human and animal organism, and represents chemically a substance of rare stability, nothing can be said against its use as a sweetening condiment.

Sucrol cannot replace sugar as a nutriment; for the latter gives to the food a certain consistency due to the comparatively large quantity to be used for the purpose of nutrition; this can never be attained by Sucrol.

THE PHYSIOLOGY OF THE TROPICAL RESIDENT.*

BY DR. V. LEHMANN.

Through residence for a number of years in Dutch India, my attention was directed to several points touching the physiology of the tropical resident.

When it is considered how long various European nations have possessed colonies in tropical regions, where Europeans have resided for years, enjoying close intercourse with the natives, it is to be wondered at that so familiar a theme as is presented by the vital functions of the denizen of the tropics has thus far received so little scientific consideration. Moreover, the same remark applies, so far at least as Dutch India is concerned, with tolerable accuracy to hygienic investigations. This, however, is not so surprising, for a rational hygiene can only be constructed on a basis of physiological knowledge.

If we would divide rationally the theme "Physiology of the Tropical Resident," we should have to deal with two things:

1. The physiology of the native.
2. The physiology of the European in the tropics.

In the second division of the subject two subdivisions would be made: (1) The condition of the European still undergoing the process of so-called acclimation; and (2) The condition of the acclimated European. Ac-

* An address delivered before the Hufeland Society.

cording to the theory of Stokvis,* both divisions would unite into one, for Stokvis holds that the European in the tropics, so far as his vital functions are concerned, becomes gradually transformed into a native. No proofs have yet been adduced in support of this view, and in the present state of our knowledge we must decidedly oppose such an opinion.

Naturally the deviations presented in the functions of the human body in tropical latitudes are only quantitative, and are conditioned partly by the external influences and partly, as we are forced to assume, by artificial peculiarities. The chief external influences are the elevated atmospheric temperature, the greater content of moisture in the air, and perhaps also the diminished tension of the oxygen. The race peculiarities of the native we are not yet able to define explicitly. One of the most striking may be considered the pigment of the skin, to which a certain significance is to be attached in the radiation of heat from the organism.

Respecting the physiology of the natives we in reality know very little.

Jousset† states that the member of a tropical race is to be distinguished from the resident of a temperate zone by greater frequency of respiration, a lesser vital capacity, and a less pronounced abdominal breathing; further, by greater frequency and lesser tension of pulse, a greater supply of blood in the abdominal organs, more pronounced perspiration, with marked reduction in the quantity of urine secreted, higher bodily temperature, less sensibility of touch and susceptibility to pain; and finally, by a slighter development of vision and hearing. This reads very prettily, but some of these statements might be strongly controverted. Let us see what has been positively determined.

According to the investigations of Daubler,‡ the capacity of the lung in proportion to bodily size is somewhat greater in the Malayan race than in the European. Daubler found the frequency of respiration in the Malayan to be, on an average, 20.3 to 20.6 per minute, whilst the Dutchman and German possessed an average of 19 under the same conditions.

Caloremetric investigations made by Glogner* have shown that the native dispels more heat through the skin than the European. As a matter of fact, the skin of a Malayan feels cooler to the touch than that of a European. This harmonizes with the fact established by careful measurements—which I can confirm from my own experience—that the bodily temperature of the native is, on an average, a half-degree lower than that of the European; hence it is not higher, as Jousset maintains.

The ordinary curve of daily temperature, according to the observations of Glogner, exhibits a different form from that prevailing in Europe; the temperature rises with tolerable abruptness during the forenoon until it reaches its maximum, then sinks a little for a short time, presenting a second maximum in the afternoon, and then sinking again.

That the Malayan perspires less readily than the European, anyone may satisfy himself by the simple use of his eyes; as also of the fact that his vision in general is far better cultivated—a remark which applies, indeed, to all the less civilized peoples.

The foregoing exhausts what we thus far know about the physiological deviations of the natives.

The gradual modification of the physiological functions of the European, which proceeds in many individuals almost like a disease process, is, as you know, designated as acclimation: but the name acclimation in reality denotes something more. In its strict sense it signifies such an adaptation to the modified conditions of life, that the European in the tropics is eventually affected by prevailing influences precisely as is the native. According to Stokvis, this is the case, but to say the least the fact is still very dubious. Hence it is generally, and as I believe properly, assumed that an unmixed European progeny, even as far as the third or fourth generation, is not possible in the tropics; and in many other respects will the European be so plainly distinguished from the natives,

* Ueber vergleichende Rassenpathologie. Verhandl. des x. internationalen medicinischen Congresses. Berlin, 1880. Bd. I.

† Traité de l'acclimatement et de l'acclimatation, Paris. Octave Doin. 1884.

‡ Berliner Klin. Wochenschr., 1885, No. 21.

* Virchow's Archiv, Bd. 116, s. 540.

even after living long in the tropics, that it may justly be said that an acclimation in the strict sense of the word is simply out of the question for the European resident of tropical countries.

The modifications which may be observed in the European, even without resort to more precise investigations, are the following:

Relaxation of the entire muscular system supervenes. Respiration becomes more superficial. In most instances the fund of bodily fat is appreciably reduced. The skin develops a greater tendency to perspiration, as a result, on the one hand, of the greater proportion of moisture in the atmosphere, which limits evaporation, and of the higher temperature on the other. *Per contra*, the secretion of urine is naturally reduced. In almost every case a paler hue is imparted to the skin.

With respect to the pallid color of the skin, it is the general custom to speak of tropical anæmia. Recently three investigations, mutually independent, have dealt with this point. It was found that the content of hæmoglobin in the blood, as also the number of red blood-corpuscles, remained quite unaffected in subjects of normally good health who had passed many years in India or in Tahiti, Guadeloupe, and New Caledonia, and the blood of the native was identical with that of the European. One of these investigations was executed by Marestang.* Of the two other investigators, both of whom made their observations in Dutch India, Eyckman † refers the pallid color of the skin to the higher temperature, which is supposed to affect the vascular nerves, and directs attention to the fact that, *per contra*, the parts exposed to atmospheric cold exhibit a more reddish tint. This explanation is rather striking when we reflect that heat or warmth in reality causes the vascular muscular system to relax, hence must expand the vessels. The other investigator, v. d. Scheer,‡ calls attention to the fact that an antagonism is supposed to exist between the vessels of the skin and the voluntary muscles, on the one hand, and the vessels of the abdominal organs on the other, so that as the one domain undergoes expansion the other is reflexively contracted. And it is a familiar fact that intestinal hyperæmia develops readily in the tropics.

These investigations have simply proved that the subjects examined were not anæmic, despite their pallid complexions, and that we cannot with propriety speak of a physiological tropical anæmia; the theory of a special tropical anæmia, however, which may be developed as a result of purely climatic influences, is by no means thus excluded. It also remains possible to assume that the blood, while indeed retaining its normal composition, undergoes probable diminution of volume.

Researches into the conduct of the blood gases are yet to be made. It remains quite conceivable that, in view of the slighter pressure of oxygen, less oxygen is absorbed, although for this purpose a very material diminution in the tension of the oxygen would be requisite in the experiments. It would seem that we may use with greater fitness the results of Lavoisier's experiments, in which it was found that man takes up less oxygen at a higher temperature, and also that the volume of the expired carbonic acid is reduced in higher temperature.

We might accordingly assume a diminution in the exchange of gases. It is further well known that in general there prevails a more active interchange of substances in cold, hence *a priori* we must look for a depressed metamorphosis in the tropics.

As early as 1881, Mourson* showed that the quantity of urine secreted in twenty-four hours is reduced in hot climates, and more recently Glogner† has investigated the secretion of nitrogen in the urine of Europeans who have long resided in the tropics and who were in a state of nitrogenous equilibrium, likewise reaching the result that the secretion of nitrogen is greatly reduced.‡

In controversion of the opinion of Stokvis

* Hématimétrie normale de l'Européen aux pays chauds. Archive de Médécine Navale, 1889, No. 12.

† Geneeskundig Tydschrift voor Nederlandsch Indië, 1890.

‡ *Ibid.*, 1891.

* Note sur les variations de l'urée, éliminé par les reins, suivant les climats froids ou chauds. Archive de Méd. Navale, 1881, No. 9.

† Virchow's Archiv, Bd. 115, s. 345.

‡ This has been controverted recently by Eyckman. Virchow's Archiv, 131, s. 147.

that the inorganic salts are increased, I have found an average discharge of chlorine equal to that prevailing in Europe.

On further development of our knowledge of metamorphosis, the question of nutrition in the tropics will become susceptible of scientific treatment. Thus far there has prevailed the greatest disparity among the theories respecting the proper nourishment of the European in the tropics. It is assumed by many that in a tropical climate less food is needed, and that vegetable nourishment must be preferred. We have the experiments of Voit and Duke Carl Theodore,* of Bavaria, according to which the same nourishment that causes the weight of a cat to remain uniform in winter produces an increase of weight in the summer; but it is doubtful whether we are thus justified in straightway drawing conclusions respecting the conditions of a tropical climate. The native of Dutch India, at all events, not only eats a good deal of food, when he can get it, but gladly partakes of animal nourishment as far as his means permit.

So far as the temperature curve of the so-called acclimated European is concerned, it exhibits the same outline as that of the native.

As meagre as are the data we possess, we may perceive that in the denizen of the tropics we are not dealing, as is alleged by Stokvis, with a "permanent summer-being," but rather that the conditions are more complex and require additional investigation.

IMMUNITY TO CHOLERA.

By treatment with subcutaneous inoculations of cultures of cholera bacilli, G. Klemperer (Berliner Klin. Wochenschr., 1892, No. 39, p. 969) has succeeded in conferring upon man immunity to cholera, as indicated by the protective influence of the blood-serum of the immune individual upon guinea-pigs in a degree proportionate to the virulence of the protective inoculation. He was also able to demonstrate that some persons possess a natural immunity to cholera—much less in degree, however, than the immunity artificially conferred.

*Zeitschrift f. Biologie, Bd. 14.

Correspondence.

READ BETWEEN THE LINES.

To the Editor of the MEDICAL AGE:

DEAR SIR:—Having just read the advertisement of Parke, Davis & Co., entitled "An Apology," in the MEDICAL AGE, I desire to thank them for the stand they have taken.

I read between the lines of their "Apology," and am constrained to remark that if matters have come to such a pass that the physician must be taught ethics by the pharmaceutist, Parke, Davis & Co. seem to be amply qualified for that important duty. More power to their elbow—the "attorneys in New York" notwithstanding!

There is one physiological function that "Cerebrine" is likely to stimulate, namely, the propagation of a breed of ducks whose *cry* is a reproach to an honorable profession; and it matters little in whose "laboratory" or under whose "supervision" it is made.

I hope the above firm will continue their physiological testings, and if they find—as they doubtless will—that "Cerebrin" has a similar tendency, drop the manufacture on the instant.

EX-PROFESSOR.

Ann Arbor, Aug. 7, 1893.

KEELEYISM.

The article on "Some of the Results of the Keeley Methods of Treatment," presented in this number of The News, is to be particularly commended to the prayerful consideration of Rev. Jenkin Lloyd Jones, of Chicago, Rev. Dr. Talmage, and all the other Right Reverends and philanthropists who have used their pulpits and official positions to help the company to make its millions of dollars. If so great a showing of the evil consequences can be gained by a little effort from a very few physicians, what would be the result if all would or could testify, and if all were known! From the very nature of the case the unfortunates and their friends must keep the great majority of instances of relapse, suicide, and insanity from coming to public notice. It is a sad history, however viewed.—*Medical News*, May 6, 1893.

Society Meetings.

PAN-AMERICAN MEDICAL CONGRESS.

Committee of Arrangements, Washington, D. C.—Samuel S. Adams, M.D., chairman; J. R. Wellington, M.D., secretary; G. L. Magruder, M.D., treasurer.

Executive Committee.—Dr. Samuel S. Adams, chairman; Snrgeon-Generals Geo. M. Sternberg, U. S. A.; J. Rufus Tryon, U. S. N.; Walter Wyman, U. S. M. H. S.; Drs. S. C. Busey, G. Wythe Cook, Carl H. A. Kleinschmidt, H. L. E. Johnson, Llewellyn Eliot, H. H. Barker, C. W. Richardson, W. Sinclair Bowen, Geo S. Ober, G. L. Magruder, J. R. Wellington, and John R. Walton, D. D. S.

Sub-Committees: *Reception.*—Dr. S. C. Busey, chairman; Surgeon-Generals Geo. M. Sternberg, U. S. A.; J. Rufus Tryon, U. S. N.; Walter Wyman, U. S. M. H. S.; Drs. J. Ford Thompson, Charles Hagner, Louis Mackall, J. Taber Johnson, T. Morris Murray, G. Byrd Harrison, and Jos. H. Bryan.

Entertainments.—Dr. G. Wythe Cook, chairman; Drs. G. N. Acker and Thomas E. McArdle.

Registration.—Dr. Carl H. A. Kleinschmidt, chairman; Drs. John S. McLain and Johnson Eliot.

Railroads.—Dr. H. L. E. Johnson, chairman; Drs. E. L. Tompkins and J. Foster Scott.

Printing.—Dr. Llewellyn Eliot, chairman; Drs. Thomas N. Vincent and F. B. Bishop.

Halls and Exhibits.—Dr. H. H. Barker, chairman; Dr. J. T. Winter and C. M. Buchanan.

Ways and Means.—Dr. C. W. Richardson, chairman; Drs. John Van Rensselaer, Wm. Dillenback, Henry B. Deale, and Wm. Compton.

Information.—Dr. W. Sinclair Bowen, chairman; Drs. E. Oliver Belt and F. S. Nash.

Hotels.—Dr. Geo. S. Ober, chairman; Drs. Wm. E. Handy and D. O. Leech.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The nineteenth annual meeting of the Mississippi Valley Medical Association will occur in Indianapolis, Wednesday, Thursday, and Friday, October 4, 5, and 6, 1893. A general session will be held each morning, and the afternoons will be devoted to section work. There will be three sections at this meeting, viz.: one on General Medicine, one on General Surgery, and one on Obstetrics and Gynecology; the last mentioned having been added since the last meeting.

The indications at present are that for genuine scientific work this will be one of the best meetings in the history of the Association. The attendance will probably be unusually large, as many physicians expect to make their visit to the World's Fair at this time. Chicago is but a few hours' ride from Indianapolis, and there is no more delightful time of the year in which to visit the World's Fair than this. Holders of tickets to Chicago on any line passing through Indianapolis will be entitled to stop-over privileges at the latter point. Cheap rates will also prevail between these two cities.

The profession of Indianapolis is united in extending a cordial invitation to physicians and their families to attend the meeting.

Reduced railroad rates will be provided, further notice of which will be given.

The Secretary will be glad to receive titles from those physicians desiring to favor the Association with papers. It is especially requested that these titles be sent as early as possible, in order to give ample opportunity for the appointment of leaders in discussion.

The Secretary will take pleasure in giving any information in connection with the meeting.

Frederick C. Woodburn, *Sec.*

No. 399 College Ave., Indianapolis.

NATIONAL WHOLESALE DRUGGISTS' ASSOCIATION.

The Committee of Arrangements and Entertainment announce that the Hotel Cadillac, situated on Michigan avenue, Detroit, will be headquarters for the nineteenth annual convention of the Wholesale Druggists' Association, which will begin its sessions on Sept. 11th next. James E. Davis, Detroit, is President of the Association; A. B. Merriam, of Minneapolis, Secretary; and S. M. Strong, of Cleveland, Treasurer.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., AUG. 10, 1898.

Editorial.

ANTISEPSIS IN TYPHOID FEVER.

Besides the general antiseptic management of this disease (disinfection of the room, of the stools, etc.), it is to-day believed by many good clinical authorities that intestinal antisepsis is both practicable and easily attainable, and that such antiseptic medication is obligatory on the practitioner. Others (perhaps equally successful practitioners) have little faith in the possibility of intestinal antisepsis, as, clearly, we cannot be sure that medicines administered by mouth will ever reach ulcerated patches in the small intestine so as materially to modify them. "For my part," says Juhel-Renoy, "I have not ceased to teach that this kind of treatment is a delusion, that the thing, *i.e.*, the antisepsis, is in no sense realized, as the labors of Fürbringer have abundantly proved, and as Stern has still more recently demonstrated. This author, in causing typhoid patients to ingest cultures of *bacillus prodigiosus*, found this pathogenic agent abundantly in the dejections, even when these patients had been subjected to antiseptic treatments the most varied."

The physicians of the Johns Hopkins, the Massachusetts General, and other hospitals of this country, have, after suitable trials, declared against internal antisepsis as a routine treatment in typhoid fever. At the Johns Hopkins and the larger number of Continental hospitals the treatment by cold baths seems to have superseded every other, "rendering" (to quote the words of one enthusiastic advocate of hydrotherapy) "all other special treatments needless."

Doubtless extreme partisan views are not to be entertained. The judicious physician will "prove all things, and hold fast that which is good." The exclusive treatment by cold baths has much in its favor, but it is hardly practicable except in hospitals. The physician in private practice is generally obliged to limit himself to wet-wrappings and frequent cold ablutions.

Can he assist the powers of nature and combat the local morbid processes by any internal antiseptics?

The affirmative is maintained by Bouchard, Smakowsky, Chauffard, Woodbridge, Legroux, Eliot, Pearson, Fussell, Hervouet, Petterute, Testi, Prince, Tarbox, J. Michell Clarke, and many others whose special articles on the antiseptic treatment of typhoid fever contain too much sound observation to be dismissed with a sneer.

We cannot presume to summarize all these contributions of the last five years, but will simply state what we believe to be the general principles of this antiseptic treatment, and the remedies best calculated to attain the end sought.

1. Intestinal antisepsis is certainly indicated in typhoid fever. Besides the general infection, there are the local effects—the intestinal ulcerations, the putrefactions which develop and which manifest themselves by the meteorism and fetid diarrhœa. These putrefactions and these lesions are a large factor in the morbid syndrome of the disease. If they can be opposed, much will be gained. There is reason to believe (as has long been taught) that the local intestinal lesions are the primary lesions.

2. Experience has proved that certain insoluble antiseptics, chief among which are charcoal, salol, salicylate of bismuth, benzonaphthol, produce a certain amount of intestinal antisepsis; they deodorize the stools and diminish their toxicity; they so far arrest putrid decompositions as to diminish abdominal tympanites. Most of the antiseptics above named are insoluble in the stomach, and cannot but traverse the entire alimentary canal. There is warrant for the belief that they not only diminish if not arrest morbid fermentations and the production of toxines, but that they reach and may modify the intestinal lesions, and that they may oppose *in situ* the pullulation of microbes. We believe that this affirmation is

substantiated by the writers above named. By their local antiputrid action these remedies also oppose diarrhœa.

The above results are something, and in a desperate case may turn the scale in the direction of recovery.

3. There is a general consensus that the quantity of these antiseptics administered in a given case must be rather large. The relative *harmlessness* of such remedies as charcoal, salicylate of bismuth, salol, benzonaphthol, is undisputed. Beta-naphthol may, says Bouchard, be given in capsules in doses of eight grains every three hours till the stools are completely deodorized and disinfected. Five grains each of benzonaphthol and salicylate of bismuth may be administered every three hours day and night. There is much testimony in favor of salol, which may be given in five-grain doses every two to four hours; according to Fussell, it promptly corrects the fetor of the stools, controls abdominal pain, and arrests diarrhœa.

Bouchard has obtained seemingly good results from powdered charcoal. He has found that with large doses he could completely deodorize and decolorize fæcal matters and diminish their toxicity. The dose which he has been in the habit of giving is a tablespoonful every two hours. He now prefers napththol β and bismuth salicylate.

Of all the intestinal antiseptics, says Trouessart, benzonaphthol is the best.

F. Henry and Testi extol thymol as an intestinal antiseptic of great value. The dose is about two grains every six hours. The results which they claim are startling. Thymol, like naphthol, is very insoluble.

Dr. Barney Yeo (Lancet, April 18, 1891) claims remarkable success from a mixture of chlorine and quinine, and insists that the diet in typhoid fever should be limited to the amount of nourishment which the patient can assimilate. If more than can be absorbed is administered, there is the more material for intestinal fermentation and putrefaction. Typhoid patients are too often systematically stuffed as a part of routine treatment, and diarrhœa and putridity are kept up by the decomposition of accumulations of food that cannot be absorbed. Hence one important part of intestinal antisepsis is to give such bland liquid nourishment as can be readily appropriated, and in moderation.

Modern antiseptic therapeutics has given us hints as to the real action of many remedies which were formerly prescribed from empirical considerations. Small doses of calomel in typhoid fever with menacing symptoms, given even till the gums were touched, formed a part of the routine treatment of the late George B. Wood (a practice not to be commended at the present day), and it will be remembered that the oil-of-turpentine treatment originated with this same physician. "More lives would be saved," says Dr. H. C. Wood, "if the oil of turpentine were more freely used in this disease."

A WARNING TO THE READERS OF THE AGE.

All publishers of medical journals, no doubt, have had the experience of submitting to the depredations of impostors who call upon physicians to collect under an assumed name, claiming to have authority to make collections.

The latest that has been reported to us is a certain Ed. E. Evans, representing himself to be an agent of the Law and Literary Exchange of Boston, E. L. Wanamaker president.

This man called upon physicians soliciting subscriptions for the MEDICAL AGE, collected money for the same, and made no returns to the publisher.

We cannot find that the Law and Literary Exchange, who claim an address in Boston and Chicago, have an address in either city, and inform our readers that they should not pay subscriptions to unknown collectors

A SHAMEFUL IMPOSTURE.

Dujardin-Beaumetz is greatly disturbed by an absurd publication that is going the rounds of the medical journals. Some one, in the interest of one of the much advertised trademark preparations whose chief merit is that it contains chloral, has written a very clever puff of that particular preparation, in which Beaumetz is made to descant on the difficulties of the diagnosis of certain nervous diseases, and then declare that *B*—— (the compound aforesaid) has often been of

great service to him in helping him to make an accurate diagnosis, on the principle that "*morborum naturas curationes ostendunt.*"

Naturally, Dujardin-Beaumetz is incensed. He writes to us as follows:

"The entire article is a fraud from beginning to end. I have never written or uttered one line commending that particular preparation, which I never use in my hospital or private practice."

The proprietors of patent and trademarked nostrums must be very "hard up" when they resort to such dishonest means of parading their preparations before the public.

This particular article (which purports to be quoted from the Bulletin Général de Thérapeutique, Beaumetz's organ) has appeared in a great many medical journals, which are no doubt liberally paid for such insertion. In fact, we happen to know that in one particular instance the editor of the journal was asked to insert a brief letter exposing the imposture, and he refused.

BRAIN FOOD.

Dr. Tully, of California, suggests that Cerebrine would be vastly improved if the brains of the horse, owing to his proverbial intelligence, otherwise known as horse sense, be substituted for the crude material taken from the ox. This suggestion is worthy of deep consideration, and we respectfully lay it before the distinguished inventor of Animal Extracts.

NO INTERNATIONAL MEETING THIS YEAR.

Notwithstanding the extensive preparations that had been made in anticipation of the Eleventh International Medical Congress, it has been finally decided to postpone the meeting until next spring. The disappointed American physicians may console themselves with the reflection that the exactions of the numerous Columbian conventions, added to the necessity of "taking in" the World's Fair, will probably prove as much as most of them can profitably attend to in the limited time at their disposal. Nevertheless, it is unfortunate that the hospitality of our Italian colleagues should be baffled by the relatively sudden development of the Asiatic plague at their very doors.

Book Notices.

CONTENTS OF SCRIBNER'S FOR AUGUST (FICTION NUMBER).

"For Awhile No One Said a Word." Frontispiece.

The House on the Hill-Top. A Tale of Modern Etruria. By Grace Ellery Channing.

The Newspaper Correspondant. By Julian Ralph. [The fourth article in the series on "Men's Occupations."]

A Sin-Offering. By W. G. Van Tassel Sutphin.

Beneath the Mask. By Howard Pyle.

A Song. By Robert Bridges.

Tiemann's to Tubby Hook. By H. C. Bunner.

Types and People at the Fair. By J. A. Mitchell. [The second of a group of "Artists' Impressions of the World's Fair."]

The Copperhead. Chapters III–V. By Harold Frederic.

Her Dying Words. By Thomas Bailey Aldrich.

The Flight of Betsey Lane. By Sarah Orne Jewett.

The Opinions of a Philosopher. Chapters VI–VIII. By Robert Grant. [A sequel to "The Reflections of a Married Man."]

Silent Amyclæ. By Edith M. Thomas.

The Wedding Journey of Mrs. Zaintree (born Greenleaf). By William Henry Shelton.

The Point of View: Enough and the Feast—Disadvantages of a Famous Relative—A Speculative Incapacity.

CONTENTS OF THE ATLANTIC FOR AUGUST, 1893.

His Vanished Star—III–IV—by Charles Egbert Craddock. Washington the Winter before the War, by Henry L. Dawes. The Meeting of the Ships, by Walter Mitchell. Little Boy Blue, by Olive Thorne Miller. The Teaching of the Upanishads, by William Davies. A Strategic Movement, by Ellen Olney Kirk. Jonathan Belcher, a Royal Governor of Massachusetts, by George Edward Ellis. A Boston Schoolgirl in 1771, by Alice Morse Earle. The First Principal of Newnham College, by Eugenia Skelding. The Breakers, by Charles Washington Coleman. "The Ogre of Alewife Cove," by Edith M. Thomas. Studies in the Correspondence of Petrarch—II—by Harriet Waters Preston and Louise Dodge. Ben, by A. M. Ewell. Relations of Academic and Technical Instruction, by Nathaniel Southgate Shaler. Anti-Slavery History and Biography. Comments and Contributions.

Notes and News.

Mediæval Medicine.—

That life is short and art long, opportunity transient and judgment difficult, are truths which the experience of man has never contested since the days of Hippocrates and probably earlier, does not contest now, and, it may be safely prophesied, never will dispute. No less true is it, however, that the impatience of man is at least equal to the transiency of his opportunities, and in all ages, disregarding his infinite intellectual possibilities, he has tended to settle on the lees of current dogma—theological, philosophical or scientific—and to solace himself with some approach to definite conclusions. Much has been laid to the charge of the *odium theologicum* in having delayed the march of inquiry in the Middle Ages, and there is, without doubt, some truth in the assertion. We question, however, whether this would have been so powerful an impediment as it proved, had it not been for the impatience of men which gave rise to theories or opinions in which their originators could scarcely themselves have believed, for had the mediæval man had the conviction of honest belief it is scarcely credible that mere scholastic repression would have proved so potent a drag on the wheels of progressive reason as it did. In an article in the Nineteenth Century Mr. E. A. King brings to light many of the empirical remedies which were current in the Middle Ages. There seems reason for thinking that a certain proportion of these were based on the theory of suggestion. Thus a coward using a portion of the skin of a lion might gain courage from a recollection of the fearlessness of the original owner of the skin, although how a quartan ague could be cured by laying the Fourth Book of Homer's Iliad on the head of the patient is more difficult to imagine. On the other hand, that frogs should be good for ague seems to be quite as rational an induction as that willows should be good for rheumatism. Yet salicin has proved of use in the latter disease. The age of the empiric is the age of the charlatan, and it is not matter of surprise that the quack should in these days have frequently been met with and that his prevalence should have brought discredit on the profession of medicine in general. Dramatists have too often portrayed the physician only to point the finger of jest or of scorn at him. It is much otherwise now, although a great deal still remains to be done. The emancipated reason of man has placed medicine in the van of the progressive professions, but the charlatan is not yet extinct, nor is modern medicine quite devoid of that adhesion to fashion in thought which delayed the progress of medicine in the Middle Ages. Let us hope, however, that the experience of the intervening ages has at least taught one lesson—that of patience—in order that a profession dealing with problems of life and of death as wide as nature itself may avoid the dogmatism of fixed ideas and ever hold aloft, as it does today, the standard of freedom of thought in the quest for truth.—*London Lancet.*

Bathing After Excessive Exercise.—

The popular notion of the injurious effect of a cold bath taken by one who is overheated from exercise must possess—as all such ideas have—some basis in experience; and yet it is falsified by the experience of athletes from the days of the Greeks and Romans even until now, who find in this procedure a refreshing and stimulating tonic after the exertion they have recently undergone. And, physiologically speaking, a cold plunge or douche taken immediately after the physical effort, when the skin is acting freely and there is a sense of heat throughout the body, is as rational as in the experience of the athlete it is beneficial. It is paralleled by the tonic effect produced by the cold plunge when the skin is actively secreting after a Turkish bath, and finds its rationale doubtless in the stimulation of the nervous system, in the increase of internal circulation, and also in the renewal of activity to the cutaneous circulation after the momentary contraction of blood-vessels due to the cold. The popular belief doubtless rests on the injurious effects which may be induced by the bath in one who does not resort to it immediately, but allows time for the effects of fatigue to show themselves on the muscles and nerves and for the surface of the body to get cool. Taken then, the bath is more likely to depress than to stimulate, there is

less power of reaction and greater liability to internal inflammations. At such a time a warm bath rather than a cold one is more suitable and more safe. It has been suggested, however, that the practice of indulging in a bath after violent exercise may initiate renal disease. Of this there is no evidence. The transitory albuminuria observed after prolonged cold baths may indicate the disturbance in the renal circulation which ensues upon them, but these cases are in a different category from those to which we are now alluding, nor are we aware of any facts to prove that, even in them, Bright's disease has been developed in consequence of the transient departure from the normal. Lastly, it must be remembered that those indulging in athletic exercises of all kinds are presumably sound in heart as well as limb, and that such persons may take with impunity, and, indeed, with benefit, measures which would be distinctly harmful to the weakly.—*London Lancet.*

They Come High —

"Organic Extracts"—"Cardine" (Hammond), "Testine" (Hammond), "Cerebrine" (Hammond), *et al.*—are sold at the exceedingly suggestive figure of two dollars *per drachm!* A modest price truly for such fluids, which may readily be duplicated at almost the same price per gallon.

When it is understood these organic fluids are recommended only for diseases which are of purely nervous origin, and that are especially amenable to "suggestion," "faith cure," imagination, etc., and, moreover, in a large majority of instances prone to spontaneous self-cure, the *raison d'être* of their invention, trademark, etc., is readily discovered.

A Notable Meeting is Expected.—

The next meeting of the Northern Ohio District Medical Society, to be held in Fremont, Ohio, on Thursday, Sept. 21st, promises to be one of unusual interest, as so many gentlemen who stand high in their special departments of practice have sent in the titles of their papers. Fremont is very easy of access, trains arriving and departing at convenient hours. All members of the medical profession are most cordially invited to attend this meeting. It is particularly desirable that the members residing in the counties of Erie, Lorain, Ottowa, Sandusky, and Seneca attend, as this is the territory embraced in the membership list.

Cerebrin.—

A bottle of Cerebrin was sent by the company with which Dr. Hammond's son-in-law is connected, to Professor Dixon, and by him placed at my disposal. I selected a typical case for its administration. A lady had for several years been confined to her bed, with no other symptoms warranting it except general debility. Repeated examinations showed an absence of structural organic disease. Here a direct cerebral stimulant, a "brain-food," was the article specially indicated. The Cerebrin was given in doses of 5 drops, twice daily, for one week, and no perceptible effect was obtained.—Waugh, in *Times and Register*, July 15, 1893.

American Dermatological Association.—

The seventeenth annual meeting will be held at the Hotel Pfister, Wilwaukee, Wis., Sept. 5, 6, and 7, 1893. The officers for 1893 are as follows: President, George Henry Fox, M. D., of New York; Vice-President, Henry W. Stelwagon, M.D., of Philadelphia; Secretary and Treasurer, George T. Jackson, M.D., of New York; Council, E. B. Bronson, M.D., G. T. Jackson, M.D., G. H. Fox, M.D., H. W. Stelwagon, M.D., J. C. White, M.D.

To Represent Austria.—

Dr. A. Politzer, Professor at the University of Vienna, was, by the decision of the Minister of Public Instruction, nominated as the official delegate of the Austrian Empire for the Medical Hygienic Section in the exhibition at Chicago. Dr. Politzer proceeded to America July 25th.

International Congress Postponed.—

A cable dispatch from Rome, dated August 2d, reports that the Congress has been postponed until April next by reason of the prevalence of cholera.

Therapeutic Brevities.

Scope and Limitations of Cerebral Surgery.—Dr. Kirchhoff has contributed to the Therapeutische Monatshefte an article on this subject, a summary of which appears in a recent number of the Revue Médicale. He enumerates the varied conditions for which operations on the head have been proposed or carried out, and indicates the reasons for and against operation in each one. Intracranial abscess, for example, is a condition in which the advisability of operative interference is not to be disputed, whether the abscess be due to traumatism or result from ear disease, and operation should be carried out as soon as the diagnosis is made. With regard to intra-cranial growths it is never easy to foretell whether a tumor producing certain symptoms is removable or not. Superficial encapsuled growths are naturally those offering the best opportunities, whilst deeper and more extensive ones do not present the same chance of recovery afterwards, and on account of the destruction of tissue and the risks from hæmorrhage the operation itself is a formidable one. Epilepsy when the result of localized lesion of the cortex is practically the only form of this disease in which a good result is anticipated from operation. Hernia cerebri, Dr. Kirchhoff thinks, may be removed if situated anteriorly, as no paralysis appears to follow. It may also be possible to remove a small one posteriorly. Of course, a condition such as hæmorrhage from the middle meningeal artery, if a result of injury, must be treated by trephining, and the same is true of the similar condition associated with pachymeningitis, although it is not easy of diagnosis. The large serous effusions associated with tuberculous meningitis, cerebral tumors, etc., have been evacuated by trephining and puncture, and such an operation may at least temporarily relieve the patient. It is doubtful whether trephining for cerebral hæmorrhage would be practiced even if the difficulty in diagnosing between that condition and softening could be overcome. Headache, if the pain be localized to some distinct tender point, offers a good opportunity for relief by trephining; but permanent benefit from operation in mental disease has yet to be obtained.

Nucleine.—At a meeting of the Academy of Medicine, M. Germain Sée made a report concerning his study of a new medicament, nucleine. Derived at first from the nuclei of cells, it has latterly been extracted from other substances, such as the pulp of the spleen, the yelk of the egg, and ill-digested casein. Its characteristic is the presence of phosphoric acid, which distinguishes it from other albumins. It is a colorless or yellowish powder, insoluble in water and alcohol, soluble in weak alkaline solutions and in water after long boiling. Administered in the daily dose of 30 to 45 grains, it is inoffensive, but produces a considerable increase of the white corpuscles. This increase of the phagocytes explains the good effects of neucleine in pleurisy, pneumonia, and other infectious maladies.

M. Sée made allusion also to the very useful diagnostic property of neucleine in latent tuberculosis. In tuberculous subjects, and in those alone, nucleine produces a fever reaching 104° F. and lasting two or three days, and a congestion of the apices. These troubles are evanescent, and are followed by no deleterious effect. In children too young to expectorate—the search for the bacilli being, therefore, impossible—nucleine may be an assistance when a diagnosis is doubtful.—*Le Progrès Médical.*

A Case of Perineal Lithotrity.—Bangs (Annals of Surgery, 1893) reports a case in which he performed supra-pubic cystotomy, removing a stone weighing 400 grains, and two protruding portions of the lateral lobes of the prostate. Siphon drainage was employed in the usual manner. The patient recovered, but had little control over the bladder. Urination was painful, frequent, and complete evacuation was impossible except by the use of the catheter, and at his best he was compelled to urinate every two hours. This condition continued for two years; treatment by rest and washing out the bladder affording some relief. Finally, after an aggravated attack, a stone was found, and incrustations on the anterior bladder wall. The author decided to perform perineal lithotrity, or Dolbeau's operation. By means of a staff and the use of Dolbeau's dilator a canal of from one to one-and-a-half inches was tunneled through the perineum and prostate, the lithotrite introduced, and the stone crushed and removed. A drainage-tube was introduced, the wound packed with iodoform gauze, and siphon drainage maintained for four weeks, when the tube was removed, and the wound healed in eleven days. The expulsive power of the bladder was quickly regained, and the patient urinated standing; the interval varied from four to six hours, and at night seven to nine hours. The author believes the improved condition to be due to the great dilatation of the prostatic urethra.

Medical Progress.

"MUCH ADO ABOUT NOTHING."—This good old world has not made its annual cycle many times since the inhabitants of its civilized and enlightened portions were startled to an unusual degree by the announcement, from a once distinguished French scientist, that the unavailing search of Ponce De Leon for the fountain of perpetual youth need no longer be lamented, and that, although he had not discovered this much-to be-desired spring in which to rejuvenate his aged members, the end could be accomplished by the injection of testicular extracts. This announcement took the world by storm. The secular and scientific publications were full of it, and a corner on the "lamb-fry" market was a natural consequence—mountain oysters going up away out of sight. Among the notables of the American continent who was early to place himself upon record was an ex-surgeon-general of the United States Army (retired list). Some of our leading houses engaged in the manufacture of pharmaceutical products, placed their chemists and crucibles at active work in making, manufacturing, and bottling spermine, testicle juice, etc. Scarcely a village with any metropolitan pretensions whatever, that did not have one or more progressive medical men who hastened to avail themselves of a means by which their elderly patrons could bid defiance to the lapse of years and the stride of time.

Well, well, we don't hear much of it now. The clinical reports appearing quite frequently at that day seem somewhat ludicrous now, though so short a time has rolled by. Among the first to embrace and the last to abandon the senile delusion of the garrulous Gaul was Dr. Wm. A. Hammond, formerly of the United States Army, later of New York City, and now of Washington, D. C. In an early number of the New York Medical Journal of this good year, 1893, he had quite an elaborate paper on the preparation and therapeutical properties of "Certain Organic Extracts." Messrs. Parke, Davis & Co., of Detroit, Mich., who have made numerous and commendable efforts to aid the practitioner of medicine, by means of their elaborate and complete appliances for manufacturing pharmaceutical products, and who have ever been in the van in introducing new drugs and their compounds, immediately, or some time thereafter, commenced the manufacture of "Desiccated Thyroids," for the cure of myxœdema, and "Cerebrin," "prepared" (as stated in their advertisement in this and other journals) "after the formula of Dr. William A. Hammond. Put up in glass-stoppered ounce vials." Also stating in parenthesis as follows: ["While Dr. Hammond has recommended maceration of the brain for six months, we have modified his method in such manner that we are enabled to thoroughly extract the crude material in as many days."]

Well, there seems to be nothing wrong in this. In fact, the abbreviation of time in manufacturing the product would seem preferable—at least so to a man up a tree. Extract of brains, as well as testicle juice, would certainly be the better for freshness. As for making use of the formula, or an improvement thereon, the same not having been at that time copyrighted, patented, or otherwise protected, or even saying that their preparation was prepared after the formula of Dr. H., or a modification of the same, we certainly think they had a right so to do, just as much as Dr. Hammond had the right, or assumed the right, to use the testicle juice of poor old Brown-Séquard, some years since. At least, if I had felt like wasting my time in such ridiculous nonsense, or any other reader of the New York Medical Journal of January last, or a reader of any other journal that may have copied the original, I would not have thought that there would have been an occasion for the subsequent display of wrath and ire on the part of the one and only Hammond. He gave his lucubrations to the public in a medical journal, issued for the public, and if one or many had seen proper to avail themselves of its real (?) or assumed benefits—why—yes, why this "tempest in a teapot?" Why this charge of fraud—aye, of *stealing* enunciated against a so well-known house, whose members are honorable gentlemen? Why this threat of legal proceedings? Yes, why all this thusness?

Possibly Dr. Hammond may have reasonable grounds for a law-suit, but will he not have to show a real value of the article at issue? If he claims damages to his good name and reputation, was he not the first to so impair it?

But, mayhap, there is a "*raison d'être*," in verity "a nigger in the wood-pile," an unquestioned feline in the meal-tub. Has Dr. Hammond copyrighted or patented his "Certain Organic Extracts?" Has he embraced Cerebrin as well as Cerebrine; Testin as well as Testine; Musculin as well as Musculine? Or, has he a proprietary right, or a silent-partnership in some other pharmaceutical house than the well known establishment at Detroit?

In giving expression to an opinion of the whole matter, we can only state that "the game is not worth the candle." In conclusion, our readers will find in our advertising pages, well worth reading, "*An Apology*," inserted by order of the well known pharmaceutical chemists, Messrs. Parke, Davis & Co., of Detroit, Mich.—*Southern Practitioner*, August, 1893.

THE IDEAL SANITARIUM FOR ALCOHOLICS.—If I were to suggest an ideal means of dealing with inebriates, it would be the establishment of a little world in which alcohol had no place, but in which life with its various occupations, domestic arrangements, and amusements went on exactly the same. It would, in fact, be a colonization scheme, such as has proved so valuable in the case of epileptics and of the insane, only much more extensive and much more feasible. The problem involved is merely the exclusion of alcohol from all part in the colony's affairs. It is true that this could not be accomplished in any region open to ordinary traffic, travel, and communication; even a Chinese wall built around such a colony would not protect it from the invasion of its enemy—it would find some means to percolate through. But I can imagine some Temperance Island so far removed from the main land as not to be accessible to small boats, with only one harbor, five to ten or more miles in diameter, amenable to the laws of the United States, the property of a corporation of practical philanthropists, where all boats and baggage and merchandise would be thoroughly quarantined against the introduction of alcohol as if it were a comma bacillus or the microbe of the Black Death. Here would be villages and industries, manufactures and arts, the commoners and the gentry, living in business prosperity and domestic happiness. Thither the drunkard would repair with his family, and, obtaining a position, support himself and them, and lead a useful life as if such a thing as inebriety never existed. A majority of inebriates would emigrate there of their own accord, but certain ones would need commitment by law for three years. Such commitment, however, would be no hardship, for the rights of voting, of citizenship, the solace of society, the pleasure of following one's trade or calling, of earning a livelihood, and of living with one's family, would make existence not only tolerable but blessed. The realization of such a project is not an "iridescent dream." It is quite within the bounds of feasibility. A small additional tax upon spirits and spirit venders would be sufficient to acquire some Nantucket and consecrate it to this purpose.—Peterson, in *Journal of the American Medical Association.*

THE PRACTICE OF MEDICINE MADE EASY.—Yes, yes, indeed, the millennium is nigh at hand. Notwithstanding the heroic efforts that have been made of late years by the organization of State Boards of Medical Examiners, the efforts at elevation of the medical profession, the extension of the time of medical study throughout nearly all, if not all, the various medical centres in the country, the tons upon tons of medical textbooks, the papers and essays of local, State, and national medical organizations, the improved methods and appliances of medical teaching, the greatly enhanced clinical advantages, the developments of the microscope, the progress in physiological chemistry, in pharmacy, in electricity, and all the arts and sciences that go to make up a most magnificent whole of the healing art and science, all are now unnecessary. The study of anatomy—aye, that of the bones, for "they are very dry,"—of physiology, of pathology, of biology, bacteriology, of materia medica and therapeutics, as well as all the other special departments over which so much time, so many valuable hours, such oceans of mid-night oil have been consumed in the past being no longer needed.

Mirabile dictu! That an ex-medical officer of the highest rank of Uncle Sam's army, now on the "'tired list," has accomplished so much! A far grander achievement than striking from the supply table of that army during its highest degree of potency, two drugs that for years previously, and even to this good day, have had a recognized usefulness as therapeutic agents. No more need of the vast array of drugs, medicines and pharmaceutical supplies that fill the many shelves of our multitudinous drug stores, to say nothing of mercury or antimony! The simplicity of "similibus curantur," or even the faith cure, the laying on of hands, *et ia omne genus*, are relegated to the shades of the past by *The Animal Extracts*, perfectly sterilized, prepared according to this wonderful savant in his laboratory at Washington, and under his immediate supervision, that can now be obtained through the druggist at two dollars a bottle.

If you have lost your eye-sight—no matter whether from glaucoma or cataract—forty nickels' worth of *Oculine* will enable you to see clearly whether your opponent, though he be "a Celestial, childlike and bland," is

sitting behind four full-fledged aces or a bob-tailed flush. If you are deaf as an adder, whether due to centric or peripheral organic lesion, closed eustachian tubes, dislocated ossicula, or perforated tympani, two hundred cents' worth of *Auricularine Asinorum* will make you fit as a fiddle to hear a flea whisper. If you have lost a leg, no need to apply to Marks, or resort to the less graceful but more euphonious *crus ligneum* while *Cruraline* or *Tibialine* can be procured for only two dollars a bottle. If your arm is gone, *Brachialine* will grow you another. If the trouble is with your generative organs, *Ovarine*, if a male, and *Testine* will do the work for the feminine gender. And if you have lost your head the remedy is cheap as dirt. Verily, the philosopher's stone is "nowhar."—*Southern Practitioner*, August, 1893.

Coca Erythroxylon.—Parke, Davis & Co., who were the first to introduce to physicians of this country this interesting drug, and have made a thorough study of its eligible and therapeutically efficient administration, make the following statements concerning its properties:

Few drugs have as interesting and remarkable a history as *Coca Erythroxylon*. As a source of cocaine alone it deserves a conspicuous niche in the herbarium temple of fame.

The coca leaf is the great source of comfort and enjoyment to the Peruvian Indian; it is to him what betel is to the Hindu, kava to the South Sea Islander, and tobacco to the rest of mankind; but its use produces invigorating effects which are not possessed by the other stimulants. From the most ancient times the Peruvians have used this beloved leaf, and they still look upon it with a feeling of superstitious veneration. In the time of the Incas it was sacrificed to the sun, the *Huillac Umu* or high priest chewing the leaf during the ceremony; and before the arrival of the Spaniards it was used in Mexico instead of money.

Coca leaves have secured the general recognition in therapeutics which those familiar with their properties have always indicated. Physicians have become convinced by personal observation that the effects attributed to the drug are only what might naturally be expected from the action of so powerful an alkaloid as that contained in the coca leaves.

There are few cases of neurasthenia in which it will not be found useful. Taken after dinner, it serves often to facilitate digestion, and even confirmed dyspeptics find their distressing symptoms relieved by it. It is of especial value in those cases where exhausting mental labor has led to morbid depression of spirits. There is no remedy like it for a fit of the "blues." It relieves the nervous irritability that follows indulgence in excesses of any kind, restoring the capacity for work and giving renewed energy. It acts as a sort of antidote to the effect of opium, alcohol, tobacco or coffee, and judiciously used may even enable one to overcome the morbid craving for any of these stimulants when they have been used to excess.

It is said that public speakers and singers have found themselves in better voice after using coca.

As a remedy for nausea and vomiting from reflex causes, particularly the vomiting of pregnancy, the cordial proves extremely efficacious. For this purpose it should be taken a few minutes before eating, and the dose repeated in an hour or two afterwards. Gastralgia is frequently relieved by this remedy, and nervous headaches often disappear under its use.

It is of service also in cases of asthma, as an aphrodisiac, emmenagogue, antiperiodic, in overcoming drunkenness, in nervous exhaustion, and internally and locally for hæmorrhoids. As a restorative of the circulation in cases of enfeebled heart it is invaluable.

This enterprising and professionally much appreciated firm, in this country, and the Mariani Co. in France, have done much to popularize this plant and its preparations with the profession, for which they are entitled to much praise and the merited success as medieal caterers which they have received.

There is an important fact, however, to which neither Messrs. Parke, Davis & Co. nor the Mariani Co. call attention, and that is the idiosyncrasy of certain persons to heart failure under its excessive use in large doses.

Some people certainly display this peculiarity in regard to this plant, at least in this country, as others do towards tobacco, antipyrin, phenacetin, as we have verified by clinical observation, and a word of caution accompanying the laudations of this worthy therapeutic agent would not be amiss. With this, as with so many other valuable therapeutic agents, the physician had best, in the beginning, cautiously feel his way with minimum doses until he shall have learned the fact and degree of tolerance. We prescribe this drug with satisfaction, but not without caution in particular cases until we have

learned its adaptability.—*Alienist and Neurologist*, April, 1893.

THINGS WORTH REMEMBERING.—It is authoritatively stated that headache almost always yields to the simultaneous application of hot water to the feet and back of the neck.

Ordinarily one woman in eight is sterile, but among women who have fibroids one in three is sterile. (Parvin.)

In facial erysipelas, where you cannot conveniently apply ordinary means, paint the part with a 10-per-cent. iodoform collodion. (Prof. Gross.)

In posterior displacements of the uterus, always replace the organ before introducing a pessary; the frequent failure of its use is generally due to this cause. (Parvin.)

Where there is a collection of foreign matter, as pus, in the antrum of Highmore, extract the first molar tooth (or more if necessary), and drain the cavity in this way. (Sajous.)

For specific vaginitis, Prof. Parvin ordered mucilaginous injections and warm hip-baths in the acute stage, followed by injections of 1:1000 corrosive solutions and tampons of boracic acid and glycerin.

Gelsemium will often do more good in irritable bladder than any other remedy. It is especially adapted to those women of hysterical type troubled by irritability at the neck of the bladder, calling for constant urination.

Convulsions may frequently be cut short like magic, by turning the patient on his left side. The nausea as an after-effect of chloroform or ether narcosis may generally be controlled in the same manner.

Apis has proven clinically a remedy of sterling merit in the treatment of pin worms, oxyuris vermicularis. It is not mentioned by writers on therapeutics, but should not for that reason be forgotten.

Without exception, the first symptom of pregnancy is an increased frequency of the desire to micturate.

Rhus aromatica, or the fragrant sumach, which grows all through the Northern States, is strongly recommended for incontinence of urine in atonic states of the bladder. From 10 to 15 drops of the tincture are given three times a day.

Salicylic acid is highly recommended as an application to ring-worm. It may be used as an ointment, but is much better as a saturated solution in collodion. One application is often all that is necessary to effect a cure, but it may be repeated if necessary. The pain caused is not usually severe.

Boro-tartrate of potassium is the first remedy for calculus in pelvis of kidney; a weak solution must be used, and for long time, a strong being detrimental. (Bartholow.)

Two-grain pills of permanganate of potash (Parke, Davis & Co.'s preferred), three or four times daily, is the most efficient remedy for amenorrhœa.

Drop into urine in a test tube a few drops of the tincture of guaiac, heat it to about 100°, and if it turns pale blue, pus is present in the urine.

Houghton, of Dublin, says that two hours of severe mental labor abstract as much vital strength from the system as a whole day of physical labor.

Unna treats "red nose" with zinc-and-sulphur ointment externally, and ichthyol internally.

A saturated solution of carbonate of soda, applied four or five times a day, is said to remove warts speedily and without pain or soreness.

Salicylate of sodium is claimed to have about thirteen times the excretive power of salicin, in the elimination of uric acid.—*Massachusetts Medical Journal.*

WILD ANIMALS AND SNAKES IN INDIA.—The destruction of human life by wild animals and snakes in India varies somewhat from year to year, but is always considerable. In 1891 more human beings were killed by wild beasts and snakes than in 1890, the deaths being respectively 24,300 and 23,801, of which by far the largest proportion—more than 21,000 in each case—were due to snakes. Cattle also suffered largely, but wild beasts are more fatal to them than snakes.

The number of human deaths is small relatively to the population of India (1 in 74,697 for wild beasts, and 1 in 10,166 for snakes); but, small as it is, it deserves the serious consideration which it is receiving from the Indian Government.

As to the means to be adopted:

With regard to the animals *feræ naturæ*, the present system of giving rewards for their destruction, combined with relaxation of the forest laws and the encouragement of sportsmen and other holders of gun licenses, if carried out persistently with any modifications of detail, but not of principle, that may be necessary in different localities, will probably in time have the required effect.

The same method, that of giving rewards, is advocated with regard to snakes. The difficulties in their case are obviously greater

because of the necessity of distinguishing deadly from innocent varieties. But the six kinds most destructive to life could be easily recognized if the pictures with which Sir Joseph Fayrer provided the Government in the Thanatophidia of India, published twenty years ago, were widely distributed over the country. These six are:

Cobra (very common).

Ophiophagus (very rare).

Bungarus cœruleus, or krait (very common).

Bungarus fasciatus, or sankni (not so common).

Daboia Russellii, or Russell's viper (common).

Echis carinata, kupper or phursa (very common).

Attention should be specially directed to the cobra, krait, daboia, and echis as most fatal to man, and a proper reward should be fixed for each of these, but no reward should, under any circumstances, be given for innocuous snakes.

There will be considerable difficulties in the way of diminishing this cause of death, and that produced by the habits of the people and the recklessness with which they expose themselves to danger will not be easily obviated; but this only renders the necessity for destroying the snakes greater. At present the means employed by various local authorities vary much; some offer considerable rewards, some none at all, while others offer one pie, which is obviously insufficient.

It is suggested by Sir Joseph Fayrer that the snake-exterminating department of the Indian Government should be controlled by an officer, specially selected, whose sole duty should consist in its administration. As strangling Thuggee disappeared under such a system, so it may be hoped this evil—though it could scarcely be expected to disappear altogether—would be considerably diminished by the establishment of an analogous system, while an officer who should be to wild beasts and snakes what Sleeman was to Thugs would prove of inestimable value to the country.—*British Medical Journal*, June 17, 1893.

An Improved Vapor-Apparatus.—In the treatment of diseases of the Eustachian tube and middle ear it is frequently expedient to resort to the use of vapors of various kinds. A convenient apparatus for this purpose has been made for me by Messrs. I. L. Lyons & Co., of New Orleans.

The reservoir consists of a heavy German glass pint bottle having two necks, somewhat similar to a Wolff's bottle. Two glass tubes, bent at right angles, are passed through rubber stoppers, the tubes extending for a distance of half an inch into the necks of the bottle. A piece of rubber tubing is attached to one of the bent tubes, the free end of the rubber tubing being attached to a hard-rubber point which fits into the end of a Eustachian catheter. A double bulb is attached to the other glass tube by means of a piece of rubber tubing two feet in length.

For use, the reservoir is partly filled with tincture of iodine, compound tincture of benzoin, or other medicament. When the bulb is used, the air passes through the reservoir, carrying the vapor through the hard-rubber point into the Eustachian catheter.

The vapor apparatus has also been modified so that it can be used by the patient at home. Instead of the double bulb, there is attached a Politzer air-bag; and instead of the point to fit into the Eustachian catheter, there is an ordinary hard-rubber nose-piece.

When using the apparatus the patient should fit the nose-piece firmly into one nostril, and close the other nostril. He should then say "hick," and keep the tongue firmly pressed against the palate while the air-bag is compressed. If properly done, the patient will here the characteristic sound in the ear.

Instead of saying "hick," the patient may take a mouthful of water, which is swallowed just as the air-bag is compressed.

In children who cannot be taught either of the above methods, the inflation may be carried on with equal success while the child cries.—Dr. Wm. Scheppegrell, New Orleans, in *Medical News*.

Cancer.—Concluding an article in the American Journal of the Medical Sciences, on the parasitic nature of cancer, Dr. Heneage Gibbs says:

The dilatation of the bile ducts in the liver of the rabbit is caused by the chronic irritation produced by the multiplication of the coccidium oviforme (Leuckart) in them; and the appearances which have given rise to the view that these parasites are developed in the columnar cells of the bile ducts are caused by the different stages in the development of the capsule.

The appearances found in a small percentage of glandular carcinomata are caused by endogenous cell-formation; the large majority of glandular carcinomata show nothing which can be considered parasitic when hardened by any method which, when applied to normal tissue, will give a typical normal section.

The Medical Age.

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Original Articles.

TYPHOID FEVER.*

BY WM. A. DICKEY, A.B., M.D.†

It need not be said, I think, by way of preface, that I shall have nothing new to offer you on the subject of typhoid fever, and really should crave your indulgence for consuming so much of your valuable time in its consideration. My apology shall be its intrinsic merit.

Typhoid fever is a disease so common, and yet so complex in its varied manifestations, one in which life and death are at times so evenly balanced, that it must ever prove an interesting theme for reflection and discussion to all who practice the healing art.

The press, both lay and medical, at greater or less intervals tells us of outbreaks of enteric fever in certain localities, and of the high rate of mortality attending them; but on the whole, I take it, this disease is not so prevalent as a decade or two ago. This arises (if it be true), no doubt, from the fact that the sanitary condition of the country is much improved, more particularly in the quality of the water used for drinking purposes.

It is unnecessary for our present purposes to discuss the symptoms, pathological changes, or diagnosis of this disease.

As to its cause, we all, I assume, accept as true its bacterial origin. Just which one of the germs, or whether more than one, produce the disease, may not be so definitely settled.

Osler, in his most classical work on the "Practice of Medicine," says the bacillus of Eberth is always present. This I think is subject to grave doubt, if not positive denial. Within the past year some very careful examinations and experiments have been made with the stools of patients suffering from typhoid fever, which resulted in demonstrating the fact that in many cases the bacillus of Eberth was not present at all from the beginning to the end of the disease. Rodel and Roux, as well as others, after a most painstaking investigation found only the bacillus *coli communis*, which is constantly present in the fæces. When the bacillus of Eberth was found, it was not, as a rule, before the tenth day, and sometimes as late as the twentieth, when such changes had taken place in the patches of Peyer as are characteristic of the disease, and giving ample time for the transformation of the bacillus *coli* into the bacillus of Eberth, if such transformation takes place in the intestinal glands, as is believed to in the spleen.

It is true that the bacillus of Eberth is only found in typhoid fever, but this is not conclusive evidence that it is the sole cause of the disease. May it not be possible then for the bacillus *coli*, under conditions favorable for its developmental change, to be the cause of the disease under discussion? Will this not account for those isolated cases with which we all meet when no source of infection is traceable? Or, lastly, may they not jointly be the cause of enteric fever? In this connection it may be of interest to note the fact that the bacillus *coli communis*, when found outside of the animal organism, viz., in privy vaults and cesspools of various kinds, undergoes such changes as make it more virulent than when isolated from the intestinal tract in its normal condition.

Whether singly or jointly the cause, certain it is that the germ gains admission to the alimentary canal through the medium of water or milk, possibly though very rarely through dust direct, or falling upon fruits or vegetables which are eaten in their raw state, where such changes take place as to produce the clinical manifestations we observe in the disease.

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*Read before the Northern Tri-State Medical Society at Toledo, Ohio, July 25, 1893.

†Professor of the Principles and Practice of Medicine and Clinical Medicine in the Toledo Medical College.

It is more than probable that the bacillus *per se* is not the cause of the changes seen, but that certain ptomaines are elaborated which give rise to the impairment of nervous and muscular tissue. This much being true, we are able to assert with great positiveness that the disease never originates *de novo*.

Next to the cause of the disease, the greatest interest attaches to its treatment. Upon the very threshold of this undertaking we are confronted with so many obstacles that the task seems a very formidable one, which indeed it is. Age, personal environment, family or race peculiarity, amount of poison taken into the system, and individual vulnerability, modify the course of the disease to such an extent that it may be truly said no two cases will present exactly similar phenomena. As a result no one line of treatment will be applicable to all cases, any more than a ready-made coat will fit all persons who may be induced to try it on.

From this it will be seen that to arrange and classify any form of treatment, and from it make certain well defined deductions, is manifestly a very difficult task. This difficulty, too, is enhanced by the fact that few persons can approach a given task without a judgment more or less pre-formed. With them a *post hoc* is a veritable *propter hoc*, and in this way a theory or hypothesis becomes an established fact. Yet I am not sure but what this may have its redeeming features, for out of what was some years ago chaos and empiricism has come much that is valuable. Hitherto we groped about, going we hardly knew whither; now certain well defined lines mark with more or less precision our limits. Not that all within these lines is known and definitely settled, for it is not; hence there is still room for investigation and research. But having a better and more accurate knowledge of pathology, we are thus enabled to institute a more rational and intelligent treatment. As a result of this changed treatment the mortality is very greatly diminished. In certain quarters, however, it would seem to be unnecessarily high. The last report from the Ohio State Board of Health gives the death rate as 40 per cent., certainly a very great mortality.

As there is no known specific for typhoid fever, the treatment must be purely symptomatic—or, to put it differently, must be hygienic and medicinal; and he who carries out these measures in their broadest and most comprehensive sense will have the lowest death rate.

Of the two, possibly the hygienic is of the more importance. Much of the decreased death rate, as shown by vital statistics, is due to our improved knowledge of hygiene, as well as its more thorough application. Upon the first suspicion of the disease the patient should be ordered to bed—and kept there. This rule should be inflexible. The disease is often prolonged and life seriously jeopardized by the individual insisting on being about, or, as he expresses it, "working it off."

The patient should be placed in a large, well ventilated room, with an easterly or northerly aspect, if possible, and, when at all convenient, with two beds, one for the day and one for the night. The mattress should have reasonable firmness, and all bed and body linen should be kept scrupulously clean. It being well established that the *materies morbi* reside in the excreta, these should be received in a vessel in which some well known germicide has been placed, and then burned. Typhoid fever being very largely preventable, every care possible should be taken that the water supply be not contaminated.

The nurse should be one of good judgment and discretion, and one that will carry out all instructions given, even to the minutest detail. The patient should be kept free from all annoyance and worry, especially so from visits of well intentioned but inconsiderate grandmothers, both male and female. This is particularly true during the increment of the disease, when the frontal headache, wakefulness, and increasing pyrexia make the patient susceptible to outside influences. Exertion, such as getting up to stool, rising up in bed from any cause, should be positively interdicted. The nurse should be instructed not to allow the patient to lie too long on his back, that hypostatic congestion may not ensue.

The diet should be liquid or semi-liquid. Milk has long been regarded as the ideal diet in typhoid fever, and yet its administration must be carefully watched. I believe it capable of doing mischief. The casein of

the milk is precipitated or formed into a hard mass before it is acted on by the digestive ferments. The peptic glands being very much in abeyance, the secretions are not up to their normal standard. As a result, fermentation is liable to take place, causing flatulence and discomfort; or these undigested particles may pass farther into the alimentary canal, where the same state of affairs may obtain, increasing the irritation and diarrhœa. In cases of this kind it is well to predigest the milk, or in conjunction with it give some approved preparation of pepsin. Lime-water in suitable amount may be given, which will often obviate the difficulty. A little baked flour will be beneficial by separating the particles of casein. The difficulty our city brother experiences in getting good milk makes it worse for him than for those who practice in the rural districts. Observation has led me to believe that it is as impossible for the average vendor of milk to be honest as it is for a politician to be truthful. If milk can undergo decomposition outside the body, and alkaloids of marked virulence be developed, as has been proven by Vaughan of Ann Arbor, why cannot it undergo similar transformation when in a bowel reeking with bacteria and their products, as is the case in a patient suffering with typhoid fever? Indeed, few articles of diet are capable of such varied and multiform changes; hence its administration should always be under the careful scrutiny of the attending physician.

Patients will often complain bitterly of being compelled to live so long on milk, and demand that something else be given them. When this is the case, some animal broth to which is added Mosquera's beef-meal, or something of a kindred character, will be found highly nutritious as well as very palatable.

The toxines secreted by the bacillus *typhosis* being excreted by the kidneys, these organs in a very large proportion of cases functionate badly—in fact, this constitutes a great source of danger; hence the patient should be allowed a bountiful supply of water, and, if too somnolent to ask for it, the nurse should be instructed to anticipate his wants with a liberal hand. It need hardly be stated that if any taint of suspicion exist concerning the water used, it should be boiled and then placed in a refrigerator to cool. Various jellies, currant and the like, in cold water, will be found a most delightful beverage, and will be taken with avidity.

It seems strange that with our present belief in the cause, and our knowledge of the pathological changes that take place in typhoid fever, anyone could be found who would claim that the disease could be aborted; but the belief is still tenaciously held to by many able and conscientious practitioners, and is to be found in all standard text-books, new and old. Notwithstanding all this, I do not believe that it ever is. It belongs to the same class of diseases as smallpox and diphtheria, and when once the poison is taken into the system, the disease, subject to the conditions mentioned at the outset, must be passed through. The time may come when this will not be true, but at present, even with our exuberant materia medica, we are in possession of no remedy or combination of remedies with which we are not just as liable to kill the patient as we are to kill the germ that produces the disease. The fact must be remembered, that as general practitioners we are not in position to practice antiseptic and antizymotic medication through the medium of the blood or alimentary canal with the same ease and certainty as the surgeon can by direct application to diseased or injured tissue. Hence the "specific" treatment advocated some years ago with so much warmth by our German *confrères*, acquiesced in and adopted by some American teachers and clinicians, has been barren of the results so fondly hoped for.

Do not, I pray you, misinterpret my meaning, and think I am indifferent to what may be termed the antiseptic treatment (which belongs to the same category) of this disease, and consider it of no avail. On the contrary, I am persuaded that considerate and well directed medication of this kind will be fruitful of good, often lessening complications and relapses. Prominent among these remedies may be mentioned salol and sulphocarbolate of zinc.

Many of these cases, from start to finish, need little or no medicine; and when this is true we should have the courage of our convictions, make the patient's surroundings the best circumstances will permit, and let him

get well. When we reflect on the amount of medicine that a few years ago was forced down the unwilling throats of victims of this disease, and the indifference shown to their hygienic conditions, we are not surprised that so many died, but that any were left to tell the tale. Many of us are too prone to treat the disease in the abstract, and from the initial visit commence to dose the unfortunate individual with quinine, whiskey, turpentine, and the rest, merely because these are given in typhoid fever, and not because they are indicated in the concrete case.

During the early part of the disease the diarrhœa, as a rule, is seldom alarming, and, unless the discharges exceed three or four in the twenty-four hours, need not be interfered with. Later, when the ulceration has proceeded to such an extent as to cause increased peristalsis, serious mischief may result. In these cases, nothing answers so well as small doses of morphine. With this I am in the habit of combining salol and bismuth. Viewed from any standpoint it forms an ideal prescription, and one that has given me good results. Charcoal for the tympanites, that sometimes is so troublesome, I have often thought gave me better results than turpentine, which is so widely and extensively used. The latter remedy is good, however, and may be used internally, and externally in the shape of hot fomentations. The indications for its use internally are, as you well know, a dry, glazed, pointed, and tremulous tongue, with a distended abdomen. When there is constipation, it should be relieved by enemas of water in which glycerin is incorporated, but never by cathartics. This constipation is often caused by deep ulcers in the bowel, and, if cathartics are used, fatal results will follow.

Hæmorrhage should be controlled by small doses of morphine to suspend the peristaltic action of the intestine. It is nature's splint, and is far preferable to gallic acid, lead, or ergot, which I believe to be practically valueless.

Continued high temperature constitutes by far the most important complication, and demands the most careful and intelligent management on the part of the physician and nurse. That it is dangerous to life, no well informed physician will attempt to deny; but it is not always the fever, so called, that kills, for many patients die who have not what might be called a high temperature. Neither is it always the cause of the delirium, as was taught by Liebermeister and others, as those of us who have practiced any number of years can bear testimony. Last year I treated a lad who was delirious for twenty-eight days, and yet during all that time his temperature did not exceed 102½°.

Unfortunately, as yet, we are in the dark as to what fever is. Certain it is that at least two factors, and very probably three, enter into its formation, viz., heat production, heat radiation, and heat regulation. The first two are the more important, and may be considered correlative functions, a disturbance of either producing what we call fever. Whether this is done by some agent acting on the tissues through the medium of the nervous system, or on the tissues direct, is not clearly settled.

For a number of years quinine seemed to hold undisputed sway as an antipyretic; indeed, it is yet used and recommended by practitioners of eminence. Its action, however, has come to be regarded as uncertain, and it is fast losing ground. The dose, to be at all effective, is so large that it is a special object of loathing to most patients; it deranges the digestive and assimilative powers, causes sickness at the stomach, pain and ringing in the head, and on the whole the patient is made decidedly more uncomfortable. I regard its use in the treatment of typhoid fever as a custom which is better in the breach than the observance.

During the past two or three years numerous new preparations have been introduced to the profession, and much lauded as remedies *par excellence* in the treatment of typhoid fever—so much so, indeed, that their use became well-nigh universal. I refer to the coal-tar series. The more thoroughly we understand the physiological action of these agents, the more thoroughly we are convinced that their use is a mistake, and I do not hesitate to say (if you will pardon the apparent dogmatism) that under no circumstances should they be used in the treatment of this disease. It is true they reduce bodily temperature, but they do so at the expense of the recuperative powers of the patient.

Often the most profound depression is witnessed, metabolism is very greatly suspended, and the ultimate recovery of the patient seriously retarded. To their use do I ascribe the enormous death rate in this State.

Unless my memory is much at fault, fifteen deaths were reported from Vienna* last year. The pendulum has swung entirely too far 'round the arc; it must and will return, and, unless I greatly mistake the signs of the times, it has already started on its backward journey.

To my mind the most scientific and logical way of treating this complication is by the cold bath. It not only keeps the temperature within reasonable and safe limits, thereby preventing excessive oxidation and fatty degeneration of the tissues, but fortifies the nerve centres against the poison, keeps up the secretions, especially of the skin and kidneys, eliminating the poison and reducing the delirium to a minimum. It increases the tone of the muscular and mucous coats of the intestines, equalizes the circulation in the latter, lessening cell proliferation and diarrhœa. It also equalizes the circulation of the lungs and mucous membrane of the air-passages, decreasing and often preventing bronchial and more serious lung complications. Patients with a hot, dry skin, headache, delirium, tossing unceasingly from side to side, will often, after the cold bath, drop into a quiet sleep from which they will awake refreshed and rational, expressing themselves as quite comfortable. What is known as the "Brand method" is difficult of execution in private practice, but very excellent substitutes can be carried out. One I have used myself, and am in the habit of recommending to those who from time to time honor me with their presence in the class-room, has given me good results. It is, however, neither new or novel.

Whenever the temperature reaches 103°, I have the entire body from head to heels sponged. The sponge should be thoroughly saturated with water just as it is drawn from the well or cistern; this is kept up for fifteen minutes, followed by friction, and is to be repeated in three hours. If this does not suffice, or a more decided impression is desired, I have the arms from fingers to shoulders, and the legs from toes to buttocks (the bed, of course, being previously protected), wrapped in cloths wrung from water as before, and a sheet placed on the chest extending from the chin to the symphysis; at at the same time the face and head are to be thoroughly sponged. Ice-water may be injected into the rectum. Ice can, if necessary, be added to the water from which the cloths about the body are wrung. These are allowed to remain fifteen minutes, followed, *a la* Brand, by friction, after which I give a glass of hot milk or coffee. So far this has never disappointed me, and it can be easily carried out. If from any cause it be thought best not to use the water as cold as indicated, water at the temperature of the body may be commenced with, which can then be cooled as rapidly as is practicable.

Among complications requiring the suspension of the bath may be mentioned pneumonia, pleurisy, perforation of the bowel and consequent peritonitis. Slight hæmorrhage from the bowel, the temperature remaining high, will not contra-indicate its use.

The advocates of the strict Brand method of treating typhoid fever (by this is meant subjecting every patient with the disease who is seen before the fifth day, and when the temperature registers 102°, to a cold bath with water at a temperature of 65°, lasting fifteen minutes, and followed by friction) claim that not a single death occurred in twelve hundred cases. It certainly speaks volumes for this manner of treatment, and is an index of what may be hoped for when some approach is made to it in private practice.

Cases will occur in which during the third or fourth week there will be a rapid, feeble, intermittent and dicrotic pulse, cold extremities, a relaxed condition of the sphincter of the bladder and rectum, indicating a failure of the heart and nervous system. For this array of symptoms I know of nothing so good as one-thirtieth of a grain of strychnia, with five or ten drops of an approved preparation of tincture of belladonna, given once in four hours, until the danger is passed. What is gained from this is more permanent than from whiskey—the remedy so much used for

*A village in Ohio of less than 200 population.

similar conditions. I know of no therapeutical agent potent for good that is more often abused than the one mentioned last. When it is given it should not be until during the decrement of the disease (except in rare instances), when the vital forces are flagging. Even then its action should be carefully scrutinized, and if the pulse is not becoming fuller and stronger, the delirium and restlessness less pronounced, and the temperature somewhat modified, its further use should be suspended.

It would be impossible to lay down hard and fast rules for the government of all cases of typhoid fever, for, as pointed out in the beginning of the paper, no two are alike, and much must be left to the judgment of the individual practitioner; nor will it be necessary to speak before such a distinguished body of physicians as this of all the contingencies that may arise, and of their management; but if I have suggested a new thought, or even put an old one in new form, homely though it be, I shall be satisfied.

Tiffin, Ohio.

URINALYSIS IN ITS SURGICAL RELATIONS.*

BY G. FRANK LYDSTON, M.D.†

General Appearance, Qualities, and Unorganized Deposits of the Urine.

GENTLEMEN: The various standard treatises upon the special subjects included in the surgery of the genito-urinary organs do not devote much space to a description of the characters of the urine in the different diseases which come under the observation of the surgeon. Such attention as is given to urinalysis is principally incidental to a description of the various diseases of the genito-urinary tract, and is very meagre. This seems somewhat strange, too, in view of the important information which may often be obtained from a careful study of the urine in different surgical diseases, particularly those involving the genito-urinary tract. It has therefore occurred to me that a little time should be devoted to the special consideration of the subject.

It is desirable for the surgeon to so familiarize himself with the gross physical characters of the urine in different morbid conditions that he can form a tolerably accurate estimate of the condition of the genito-urinary organs without an exhaustive chemical and microscopical examination. To pursue accurate investigations in the minutiæ of urinalysis, considerable technical knowledge of analytical chemistry and of the science of microscopy is necessary; but for the application of pathologico-chemical facts and the main features of urinary microscopy to the diagnosis of genito-urinary diseases, a moderate degree of familiarity with microscopical and chemical technique is amply sufficient.

Todd has wisely said that "although it is clearly a duty not to neglect any means of observation and investigation, it is desirable that you should be as little as possible dependent upon means which are not always at hand, and which it does not fall to the lot of every eye and hand to use with equal readiness and skill."* The greatest of modern pathologists, Professor Virchow, has expressed himself in a somewhat similar manner as regards what he has aptly termed "naked-eye pathology." The experience of most practical pathologists is corroborative of the assertion of this eminent authority that microscopical characters may generally be anticipated by a conscientious and expert macroscopical examination.

It is not my intention to take up the subject of urinalysis in detail, nor indeed in general, excepting in so far as it applies more or less directly to surgical diseases.†

THE QUANTITY of urine varies greatly

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*Clinical Lectures on the Urinary Organs.

†The student is referred to Peyer's elaborate work upon Clinical Microscopy for illustrations of the various deposits which occur in the urine in health and disease.

There are numerous exhaustive treatises upon urinalysis, as well as some smaller handbooks which will be very useful to the student; Flint, Ralfe, Marshall and Smith, Haines, Deems, and Oliver have each published excellent little manuals on urinalysis. Neubauer and Vogel have recently published a most exhaustive treatise upon the subject.

even in health, the amount excreted being dependent upon a number of circumstances; it varies considerably with the season of the year, being greater during the winter months. This variation is due to the difference in the activity of the skin in cold and hot weather. In the summer the rapid and profuse excretion of fluid by the skin diminishes the amount excreted by the kidneys; *pari passu* with this diminution in quantity, we note, *cæteris paribus*, an increase in the proportionate amount of excreted solids. The quantity of urine is obviously modified by the character of the food and drink. Vegetable diet, which contains a large proportion of fluid in its composition, produces a larger excretion of urine than does purely animal food. The amount of fluid ingested necessarily modifies the quantity of urine more than any other circumstance. The condition of the bowels modifies the quantity of urine. A patient with a diarrhœa is likely to excrete urine in scanty amount. This is well illustrated in Asiatic cholera, in which complete suppression of urine eventually occurs, being explicable, in part at least, by the rapid removal of fluid from the blood by the alvine evacuations. The condition of the kidneys modifies the quantity of urine as well as its proportion of solids. Much depends upon the condition of the nervous system; vaso-motor disturbances being productive of an increase or decrease, as the case may be, in the amount of excreted urine. Thus, we have a condition of hydruria, or an excessive amount of watery secretion from the kidneys, in cases of diabetes insipidus, in which the daily urinary flow may amount to from 7,000 to 10,000 cubic centimeters, the specific gravity being very often as low as 1002. Persons of a highly nervous or hysterical temperament are not infrequently affected by this condition. It is a not uncommon experience for those who are subjected to mental strain or anxiety, or to the emotions of anger or fright, to have an enormous increase in the quantity of urine. Students undergoing the ordeal of examination are quite apt to be affected by hydruria. The term *hydruria* is properly applied only to that form of excessive urinary secretion in which there is a marked increase of fluid with a coexistent diminution of solids. When the increase of water is attended with an increase in the amount of urinary solids from exaggerated tissue metabolism, the condition is properly termed *polyuria*.

The Proportion of Solids contained in the urinary fluid is modified by the same influences as those which affect the quantity of the excreted fluid.

A very simple method of determining approximately the amount of solids in the urine is given by Flint.* The specific gravity of the urine is to be taken, and between 1010 and 1030 it will be found that the last two figures of the specific gravity represent tolerably accurately the number of grains of solids excreted in each ounce of the urine. By ascertaining the total number of ounces excreted in the twenty-four hours, we can readily determine with sufficient accuracy for practical purposes the total amount of solids excreted. This is important as showing whether the kidneys are performing their functions sufficiently well to obviate the danger of uræmia in certain diseases. In making this estimate of the quantity of solids excreted, it is necessary to take into consideration the quantity and quality of the food and drink. The determination of the amount of solids excreted during the twenty-four hours may be a very important consideration in connection with operations upon the genito-urinary organs. Indeed, it may influence us either to avoid or perform an operation in cases in which the amount of albumin is of negative importance.

The diet and exercise modify the amount of solids very markedly. Thus, a diet of highly nitrogenized food increases the amount of solids, and particularly urea, to a marked degree, causing a condition described by Fuller† as *baruria*, with a large increase in the total amount of urinary solids. Urine of this character is very concentrated, and urates are usually deposited. This condition of the urine exists in what was termed by Murchison *lithæmia*. This state of the blood bears an intimate relation to urinary calculus and various irritative and inflammatory affections of the genito-urinary tract. Dr. Andrew Clark has described a condition

* *Op. cit.*

† Medico-Chirurgical Transactions, vol. li.

known as *renal inadequacy*, in which there is a notable deficiency in the amount of urea excreted, without marked or constant change in the amount of fluid passed. He has failed to show, however, whether this condition depends upon insufficient renal action or upon deficient tissue metabolism. The quantity of urine and the proportion of fluid and solid ingredients, is one of the most important considerations to be brought to your attention in connection with the various surgical affections of the genito-urinary tract. If you are perfectly familiar with the conditions which modify the composition and amount of the urine, you will have gained a great advantage in the management of these diseases. Thus, in diseases of a calculous or inflammatory character, it is obvious that it is desirable to increase as far as possible the proportion of fluids and decrease the amount of solids. This may be accomplished by diet, rest, modification of exercise, hot baths, the administration of large quantities of fluid, and various diuretic remedies.

Another consideration is the condition of the digestive apparatus, for if the functions of the stomach and liver be impaired there will be present in the urine more or less crude products of tissue metabolism. Thus, instead of complete metamorphosis, the termination of which should be the production of urea, we are apt to have as a result of imperfect preparation of the food by the digestive apparatus a cessation of the process midway with resulting formation of uric or lithic acid. This is one of the causes of lithæmia. It is to be remembered in this connection, however—and seemingly many writers upon this subject fail to appreciate this fact—that the quantity and preparation of the food for assimilation are not the only circumstances upon which lithæmia depends, for there may be a normal proportion of nitrogenized food and perfect preparation by the digestive apparatus which fails of its object because of defective tissue metabolism. It is necessary, therefore, in considering the ways and means of lessening the irritating properties of the urine, to take into consideration the amount and quality of the food, the activity of the digestive functions, and the activity of those physio-chemical changes the function of which is the final disposition of the nutrient pabulum. This question is of more importance to the surgeon than is evident upon superficial observation, as will be seen in connection with the subject of urinary calculi.

The Specific Gravity, Color, and Odor vary considerably, being dependent upon the same circumstances that affect the quantity of the fluid and its proportion of solids. Urine containing a large proportion of solids is of a high color, as a rule, and of a high specific gravity. The urine of hydruria is pale and limpid, and of a low specific gravity. This is seen in some cases of surgical and granular kidney. The urine of lithæmic or gouty subjects is of a high color and high specific gravity. Urine of a low specific gravity has comparatively little odor. Normal urine has a peculiar aromatic smell, which grows strong and pungent *pari passu* with an increase in its proportion of solids. Various diseases, and the ingestion of certain drugs, modify the properties of the urine just described. Blood and pus modify the odor to a certain extent, and necessarily modify the color in proportion to the amount of these substances present. Carbolic acid, the preparations of iodine, and santonin taken internally, modify the color of the urine. Certain articles of diet also modify it. Asparagus gives a peculiarly offensive odor and dark color to the urine. Diuretics of various kinds increase the proportion of water and consequently lessen the pungency of the urine and cause it to become paler. In a general way, the urine may be said to be irritating in proportion to its height of color and degree of pungency.

In a large number of observations upon subjects for life-insurance examinations, I have noticed that the recent ingestion of malt liquor causes a marked diminution in the specific gravity of the urine as well as a relative increase in its quantity. This diminution in the specific gravity and increase in quantity is greater than could possibly result from the mere addition of an extra amount of fluid to the excreted urine. So closely associated in my experience are the ingestion of malt liquor and an abnormally low specific gravity of the urine that I immediately suspect, when the fluid has a specific gravity of less than 1015 (and 1010 is frequent), that

the applicant has recently been drinking beer. In the majority of instances I find this suspicion verified upon inquiry.

Copaiba, cubebs, sandalwood, and turpentine—drugs which bear an important relation to genito-urinary surgery—markedly modify the odor of the urine. Normal urine has an odor *sui generis*, which has been described as of an aromatic character. Urine containing a volatile alkali from decomposition evolves a strong ammoniacal odor. When it contains a fixed alkali, however, the odor is faint and disagreeable, something like the urine of the herbivora. Urine containing phosphates, particularly the phosphate of lime, speedily decomposes, and has a horribly offensive odor.

THE REACTION of normal urine varies considerably at different periods of the day. The urine of fasting is generally quite acid, becoming neutral or perhaps faintly alkaline a short time after the ingestion of food. Bence Jones* explains this diminution in the acidity of the urine by the abstraction of acid from the circulation for the supply of the gastric juice. Roberts,† however, is inclined to regard the change from acid to alkaline as due to the introduction of alkaline bases from the freshly digested food into the blood. The acidity of the urine is markedly modified by the quality and quantity of the food, by exercise, and by various diseases of the genito-urinary tract. An excessive ingestion of nitrogenized food increases the acidity of the fluid to a marked extent. A vegetable diet renders it alkaline. Chronic inflammatory diseases of the urinary organs usually produce alkalinity of the fluid. Thus in chronic prostatic and vesical disease the reaction may be strongly alkaline, a decided odor of ammonia being perceptible. Strongly acid urine deposits urates upon cooling, while alkaline urine deposits phosphates. It is desirable sometimes to differentiate the alkalinity due to volatile alkali dependent on ammoniacal decomposition from that due to a fixed alkali (potash or soda). This is readily done by observing the behavior of litmus paper which has been dipped in the urine and allowed to dry. The blue color produced upon red litmus by ammoniacal urine disappears as the paper becomes dry, while in the case of the fixed alkali it persists.

THE TRANSPARENCY OF THE URINE is an important consideration. Urine, although dark, may be perfectly clear; while light urine, on the other hand, may be perfectly opaque, according to the presence or absence of extraneous matter or urinary deposits. Opaque urine may be very light or very dark. When of a light color it contains either earthy phosphates, mucus, or pus, singly or combined. Mucus is more apt to form a distinct cloud in the urine than is pus, which from its higher specific gravity sinks to the bottom of the vessel. This, however, depends somewhat upon the character and origin of the pus. For example: in pyelitis the pus is powdery and easily diffused throughout the fluid, while in cystitis or abscess emptying into the bladder it forms a more distinct layer. Purulent urine may, however, be completely opaque with a distinct, thick, yellowish layer of corpuscles at the bottom. When urine is turbid from either mucus, pus or salts, it may be filtered before examination. When the urine is of a dark opaque appearance it may contain blood or bile. Carbolic acid, chlorate of potassium and creasote poisoning make the urine very dark and opaque. Chlorate of potassium in poisonous doses imparts in some instances an almost black color to the urine.

Turbidity of the urine is often indicative of a diseased condition of the genito-urinary tract where no subjective symptoms of disease exist.

In an excellent article by Dr. P. S. Hayes,* attention is called to the relation of bacteria of various forms to more or less marked turbidity of the urine: Thus bacteria of various forms may be found in the urine in cases in which there are no definite symptoms of organic disease. The micrococcus urea, vibrios, rod-like bacteria, and spirilla are apt to be met with. The author found in one specimen six different varieties of bacteria within three hours after the urine had been voided. He states that "urine which is turbid when voided, and is not cleared on filtration, almost always contains bacteria."†

* *Op. cit.*
† *Op. cit.*

* Western Medical Reporter, September, 1888.
† Peyer makes a somewhat similar statement.

Independently of the presence of bacteria, turbidity of the urine is apt to indicate an unhealthy state of the mucous membrane, which may be the result of old organic disease, or of present slight disturbance which may later on become sufficiently marked to attract attention and to require treatment. Bacteria may be implanted upon the vesical mucous membrane by catheterization, and give rise to a low grade of irritation with the resultant formation of mucus, this condition being capable under favorable circumstances of progressing to actual catarrhal inflammation.

It is possible that our author's enthusiasm has led him to rather too arbitrary conclusions regarding the significance of slight turbidity of the urine, and a certain amount of allowance should consequently be made. The subject, however, is one which is well worth our attention. In making such observations great care is necessary as regards the cleanliness of our manipulations of the urine. I have recently made a little observation in connection with this that was to me very instructive as showing how rapidly the urine could become turbid after evacuation. In making life-insurance examinations I had been in the habit of having the applicant void urine into a large-mouthed bottle, from which I took a sample for examination. This bottle was thoroughly rinsed with cold water—which I deemed under the circumstances sufficient for cleansing—before and after use, on each occasion. I had noticed for some time that in quite a proportion of instances the urine was not as clear as could be wished, and upon microscopical examination of a few of the specimens I found some of them swarming with bacteria. It was noticeable that when the urine was examined immediately after being voided it was clear and did not contain bacteria. The explanation of the difficulty was finally found to be a slight accumulation of urinary sediment upon the sides and bottom of the bottle, which rinsing with cold water had been insufficient to remove. In this sediment bacteria had thrived and waxed fat, and when the healthy urine was voided into the bottle they very soon began to multiply very rapidly. Frequent scalding of the vessel since the discovery of this fact has obviated further difficulty.

Persistent Foam upon the urine (*i.e.*, foam remaining upon the surface for over half an hour) is an indication, as a rule, of either albuminoids or bile, or both. Mucus in moderate amount is also productive of persistent foam. This is suggestive in a general way of a catarrhal state of the mucous membrane of the urethra, bladder, pelvis of the kidney, or of structural renal disease. It is a point well worth remembering.

It is very useful to the practitioner to be able to form a general estimate of the character of urinary deposits from their gross appearance. Sediments occur in this fluid very frequently, and may be deposited in it before evacuation from the bladder, as is apt to be the case in certain forms of kidney and vesical disease, or they may appear only after the fluid has stood for a variable time. Thus, these various substances may be insoluble in the urine primarily, or they may be soluble in the warm fluid, but rapidly precipitated when it becomes cool; still other sediments result from chemical changes which occur with greater or less rapidity after the evacuation of the fluid. A deposit of a fawn color and of a more or less powdery consistency (when not mixed with mucus) appearing in the cold urine, but dissolving when it is heated, consists of the urates of ammonium and sodium. Cystin is another but much rarer deposit of a similar color, which is not dissolved by heat and is only slowly acted upon by alkalies. A heavy red, sandy deposit at the bottom of the vessel is composed of uric acid. This deposit is dissolved both by nitric acid and by alkalies. Blood corpuscles may form a reddish deposit at the bottom of the fluid; the peculiar color giving a fair idea of the character of the deposit. A deposit of a whitish color not soluble in the heated urine, and often deposited by heating previously clear urine, is composed of the earthy salts (triple phosphates, phosphate of lime, oxalate of lime); the oxalate of lime and phosphates are differentiated by adding acetic acid, the latter deposit clearing up, while the former does not. A creamy-white, ropy, or flocculent sediment is probably mucus; a greenish-yellow deposit forming a sort of jelly with liquor potassæ is usually composed of pus or muco-

pus. Long whitish strings or filaments often occur as a consequence of stricture.

The various urinary deposits require special consideration.

Urea is one of the most important substances for our consideration in connection with the excreted solids of the urine. It does not occur as urea in the form of deposits, but in chemical combination (urates). The reason for its non-appearance in deposits is its solubility. The quantity of urea excreted during twenty-four hours is the best criterion of the activity of the excretory function of the kidneys, and is of importance in its relations to both medicine and surgery. If in any particular case you have determined the amount of urea excreted, you are in a position to ascertain whether the patient is in danger of uræmia or not—in other words, whether the kidneys are properly performing their eliminative function. This question is worthy of your most careful consideration in connection with operations upon and diseases of the genito-urinary tract.

Urea represents the ultimate product of tissue metabolism, and its amount depends (1) upon the amount of nitrogenized material introduced into the system;* (2) upon the activity of physio-chemical transformation of the nitrogenized elements of the food after its digestion and absorption; (3) upon the actual amount of waste of the fixed tissues.

In all diseases in which fever is a symptom the excretion of urea is increased. Diseases of the liver modify the amount of urea, inasmuch as it is the organ in which the physio-chemical changes which tend to the formation of urea are the most energetic. In hepatic abscess, and in cancer of the liver, a notable diminution is observable. The various forms of surgical disease of the kidney itself lead in a general way to a diminution in the excretion of urea.

For ordinary purposes it is not necessary to resort to the intricacies of quantitative urinalysis to determine with sufficient accuracy for practical purposes the amount of excreted urea. If the total quantity of urine be normal or nearly so, and the specific gravity of the urine is not appreciably lowered, it may be inferred, if sugar is not present, that a sufficient amount of urea is being excreted to fulfill the needs of the economy. If the specific gravity is low, but there is a compensating increase in the total amount of excreted urea, we are also justified in believing that there is no imminent danger of uræmia. Due consideration must, however, be given to the amount of fluid ingested, and the amount and quality of the food.*

Uric Acid was formerly thought to be the characteristic element in the composition of urinary calculi, hence it was called lithic acid. Since the discovery of this substance, however, more than 100 years ago, it has been shown to bear an important relation to gout, and inferentially it has been demonstrated that a gouty or lithic condition of the blood is the foundation for many cases of urinary calculi. Dr. Garrod in particular has dwelt upon the association of uricæmia with gout, and has shown that an excess of uric acid is present in the blood during an attack of that disease.

Uric acid may be described as a mid-product of tissue metabolism; it is the result of imperfect oxidation of those nitrogenized elements of the food which should be converted, on the one hand, into substances ready for assimilation by the tissues, and upon the other into urea. Uric acid bears an important relation to the surgical affections of the genito-urinary tract: the severity of all inflammatory affections being to a certain extent dependent upon its amount, not only as present in the urine, but as present in the blood—not that the acidity of the urine is dependent upon uric acid, but that urine containing an excess of this substance is heavy and irritating by virtue of the mechanical effects of the crystals themselves. The intimate association of uric acid and the urates with urinary calculus is familiar to every practical physician and surgeon.†

The close association of uricæmia with

*According to Flint, a purely animal diet increases the amount of urea excreted two-fifths, while a non-nitrogenized diet reduces it one-half; purely vegetable diet reduces it one-third.

*General nutrition may be so modified that comparatively little urea appears in the urine, yet this small amount represents all, or very nearly all, that is formed in the system; this is the salvation of some patients with surgical kidney.

† Of 184 stones removed by Sir Henry Thompson by lithotrity, 122 were composed of uric acid and urates.

gout, is well illustrated by the fact that the so-called gouty deposits or tophi which occur in the joints, the cartilages of the ear, and in the tubuli recti of the kidney, are composed of sodium urate. Uric acid requires for its solution something like 15,000 parts of water, in this respect differing markedly from urea, which is very soluble. Thus, when the urine is very concentrated, and the amount of water much below the normal standard, the deposition of uric acid is likely to occur. Uric acid and the urates may vary in quantity by modifications of diet. Uric acid when deposited in the urine in a free state resembles in appearance brick-dust or red pepper.

Oxalic Acid in the form of oxalate of lime has given rise to considerable controversy regarding its origin among those interested in genito-urinary pathology. It has been generally held that oxalate of calcium as a urinary deposit is a derivative of the decomposition of uric acid after its excretion, thus implying that the crystals of oxalate of lime signify only an excess of uric acid. It has been assumed by those who accept this view that oxalic acid (*i. e.*, oxalate of lime) bore the same relation to uric acid that uric acid does to urea. This hypothesis would imply that the process of oxidation if stopped at a certain point produces oxalic acid; a little further on, produces uric acid; and when perfected, urea. *Per contra*, in order to obtain oxalic acid from uric acid it is necessary to oxidize it more completely. The determination of the precise influences which produce oxalic acid in the tissues is necessarily a very difficult matter. In spite of all theories which have been advanced in explanation of the origin of this substance, we have as yet been unable to say more than that an excess of oxalic acid in the blood, and of oxalate of lime in the urine, is a consequence of certain undetermined perversions and modifications of tissue metabolism.

A small quantity of oxalic acid is present normally in the blood, and is discovered in the form of oxalate of lime in the urine as a consequence of numerous circumstances. Its presence may be due to: (1) An ingestion of an excessive quantity of food substances containing the oxalate of lime, *e. g.*, certain vegetable matters such as rhubarb, tomatoes, turnips, and onions; rhubarb containing a large quantity of this substance. (2) From imperfect oxidation of starchy and fatty food materials, which before their final transformation into H_2O and CO_2 pass through transformations in which they present themselves as organic acids, *i. e.*, oxalic, lactic, and glycocolic acid. (3) An increase in the physio-chemical activity of the tissues. This involves the question of exercise and of hyper-metabolism of tissue due to certain nervous influences. (4) It has been asserted that oxalate of lime may be derived from the mucus of the genito-urinary mucous membrane. The only way that this could occur would be through acid decomposition excited in the urine by the mucus. This theory of the origin of oxalic acid, although advanced by an excellent authority (Meckel), is evidently purely theoretical. (5) An excess of acid in the blood and tissues as a result of butyric and lactic fermentation in the alimentary canal. These substances being absorbed, are not completely oxidized or transformed into CO_2, and as a consequence the mid-product, oxalic acid, is formed.*

The presence of oxalic acid has been claimed by certain observers to bear a certain relation to diabetes. Thus Cantani asserts that he has noted an alternation of oxalate of lime and sugar in the urine. Fürbringer discovered oxalic acid in the sputum of a patient suffering with diabetes.

The excretion of oxalic acid has received considerable attention. When present in excess it has been supposed to signify abnormal conditions of tissue waste, and has been described as a distinct disease, *oxaluria*. While unquestionably the presence of the crystals of oxalate of lime in the urine may produce irritation of the mucous membrane

*Lehmann admits that oxalic acid is formed spontaneously in the system under certain pathological circumstances, and explains its occurrence upon the basis of a modification of the function of respiration. By virtue of this perturbation, carbonic acid remains in excess in the blood and inhibits oxidation. Debout D'Estrées (Medical Record, Dec. 8, 1888) asserts the common origin of the uric and oxalic acid diatheses, and claims that the same conditions which induce uricæmia will in the presence of nervous perturbation cause oxalæmia. This seems logical enough, for certainly trophic disturbances—*i.e.*, perturbations of metabolism—modify the results of the metamorphosis of nitrogenized food pabulum.

of the genito-urinary tract, with frequent micturition and pain in the back, I am satisfied that the importance of the substance has been greatly over-estimated. It is hardly fair to ascribe a severe pain in the back, accompanied by an excess of oxalic acid in the urine, to the irritation of this latter substance in all cases, for the relation of cause and effect is difficult to demonstrate. Such diagnoses are apt to lead to a confusion of *propter* and *post;* in other words, the pain and oxaluria may both be dependent upon actual renal disturbance.

Oxalate of lime is associated with one form of urinary calculus (the mulberry), which is composed nearly or quite entirely of that substance. Oxaluria is apt to be associated with certain conditions of digestive disturbance and nervous depression.

Phosphoric Acid in the form of the phosphates is a frequent and important form of urinary deposit. The triple phosphate or ammonio-magnesian phosphate is the most frequent form, the phosphate of lime the rarest. The acidity of the urine is dependent upon the bi-phosphate or acid phosphate of soda.* Phosphates are not deposited as long as the urine remains acid, but as soon as it becomes alkaline a deposit speedily occurs, whether the phosphoric acid in the urine be in excess or not. The principal surgical importance of the phosphates consists in their relation to urinary calculus, hypertrophy of the prostate, chronic cystitis, and pyelitis. Whenever the urine decomposes as a consequence of an excess of mucus or of prolonged retention, a deposit of phosphates occurs. If a foreign body be present, this deposition of phosphates occurs about it, and solidifies, eventually forming a calculus about the nucleus; thus, it may form about a uric-acid or oxalate-of-lime gravel that has come down from the kidney, a clot of mucus, or a foreign body introduced into the bladder from without. The addition of an acid to phosphatic urine clears it up immediately.

Zanthic Oxide or Zanthine presents itself in the urine as a very rare form of urinary calculus. Cases of this kind have been reported by Langenbeck and Bence Jones. Such cases have been seen in young subjects.

* Flint, *op. cit.*

ANTISEPSIS IN ACCOUCHEMENTS AND IN GYNÆCOLOGY.

BY DR. E. L. TROUESSART.

One of the principal antiseptics employed in gynæcology is *boric acid* in saturated solution (4: 100). Boric acid is a feeble antiseptic, but very useful for large injections on account of its absolute innocuousness, and serves for intra-uterine as well as vaginal injections. It should be dissolved in boiled (*i.e.*, sterilized) water. *Borated vaselin* (4: 100) is the favorite antiseptic ointment of obstetricians.

Phenic acid has long been employed. Strong solutions are only to be used when a caustic action is desired. A 2: 100 solution is suitable for cleansing wounds and as a lotion for cutaneous diseases. Phenic acid, being but little soluble in water, is generally dissolved by the help of alcohol or glycerin. The essence of thyme masks its odor. In obstetric practice one drachm of the concentrated phenic acid may be mixed with a drachm of glycerin and dissolved in a pint of hot water; this solution suffices for vaginal and even intra-uterine injections, but it should be allowed to flow freely out again after being injected. The concentrated phenic acid should contain just enough alcohol to keep it liquid, *i. e.*, about 10 per cent.

Salicylic acid (1–2: 100) is but little employed in gynæcology.

Alum is a feeble antiseptic; a common astringent vaginal injection is made by dissolving a heaping teaspoonful in a pint of water.

Nitrate of silver is employed chiefly to cauterize the tissues. The solid stick brushed over diseased surfaces was formerly a favorite application in cervical endometritis and erosions of the os. It has largely gone out of use. As a preventive treatment of the purulent ophthalmia of new-born babies it is employed according to Credé's method. At the moment of birth, a few drops of 2-per-cent. solution are instilled between the eyelids. The black stain which it leaves on the skin and the linen makes it extremely objectionable, in ordinary practice, for the antiseptic treatment of the genital organs.

Chloral in solution (1–2: 100) is too irritant for general use. Has been prescribed for pruritus vulvæ.

Liquid *chloride of lime* (1: 10) is chiefly employed for the disinfection of chamber-vessels and water-closets. *Chloride of zinc* solution (1: 100) may be substituted for it.

Creolin in solution (1–2: 100) is little toxic, and does not corrode instruments. A 3-percent. solution is said to have an antiseptic power equal to that of corrosive sublimate 1: 1000.

Creasote has the property of coagulating albumin and of exercising a caustic action to a certain depth. It is useful after curetting, as a mildly caustic application to the uterine mucosa.

Creasote may be employed pure or in solution with alcohol and glycerin. A strong solution consists of equal parts of these substances. A weaker solution, much in use, contains one part of creasote and one of alcohol to eight of glycerin.

Iodoform is an excellent antiseptic, and almost indispensable in all the operations of gynæcology. Its favorable action on suppuration and ulcerations is manifest, and assures for it an incontestible superiority over all the other dry antiseptics. A good vaginal suppository is made as follows:

> Iodoform, 1 gramme.
> Glycerin, 8 grammes.
> Cacao butter, q. s.
>
> For one suppository. To be introduced into the vagina or uterus after accouchement.

Iodoform gauze and *iodoform cotton* are in daily use in gynæcology, despite the unpleasant odor which attaches itself to the hands, instruments, and garments.

Iodoform-glycerin (1 part to 4 of glycerin) is useful for soaking vaginal tampons to modify ulcerations or erosions of the os uteri.

Iodoform is also employed in powder for a dressing for wounds, being applied by a powder-blower, or dusted over the parts.

Iodol is void of odor, and may be substituted for iodoform in ordinary practice, being less likely to produce toxic accidents, though possessing a feebler antiseptic power.

Iodine, under the form of *tincture of iodine*, is employed as a caustic for painting the cervix uteri.

Ichthyol (*sulpho-ichthyolate of ammonia*) pure, or in solution in glycerin, is employed for the same purposes. By its siccative action it modifies advantageously the uterine and vaginal secretions, and it enters into the composition of many topical remedies.

Corrosive sublimate is very much employed in watery solutions. Van Swieten's solution is 1 per 1000. The formula is as follows:

> Bichloride of mercury, 1 gramme.
> Alcohol, 100 grammes.
> Water, 900 grammes.

For ordinary injections the saline solution may be used:

> Bichloride of mercury, 1 gramme.
> Chloride of sodium, 5 grammes.
> Water, 1000 grammes.

This solution, which should be made with sterilized water, should be diluted with as much boiled water for vaginal injections, and for irrigations during operations. The sublimate tablets, each containing ½ gramme (7½ grains), are very convenient for obstetric practice. One of these dissolved in a pint of water makes the 1: 1000 solution. Surgical instruments should not be kept in the sublimate solutions during operations, but in a boiled carbolic solution, which will not tarnish them.

Naphthol β may be employed in solution of 1 per 1000 when poisoning by corrosive sublimate or carbolic acid is feared. One gramme of naphthol β may be dissolved in 50 of alcohol and 950 of water for ordinary use.

Permanganate of potash in solution is a good antiseptic which has no disadvantage except that it stains the skin and the linen red. Fifteen grains (1 gramme) to the pint makes the strong solution, 15 grains to the quart the weak solution. [The latter is a good antiseptic in obstetrical practice.]

Salol in powder or in the form of crayon is employed in the treatment of ulcerations and in endometritis.

Sulphate of copper in 1: 1000 solution is of feeble toxicity, and may be employed in vaginal or uterine injections when corrosive sublimate is contra-indicated. *Sulphate of zinc*, less active, is often prescribed in leucorrhœa of blennorrhagic origin, or in simple leucorrhœa.

Thymol is of too high a price to enter into ordinary practice.

Microcidine (a compound of naphthol β and of soda) is very soluble and little toxic. It is used in obstetric practice for vaginal and uterine injections before and after accouchement, in 4:1000 solution.

Obstetrical Antisepsis.—The obstetrician of to-day hardly needs enlightenment as to all the preliminary precautions in the way of personal cleanliness and antisepsis necessary before he attempts the care of a puerperal woman. The same care is obligatory on the nurses and other attendants. When an obstetrical operation is to be performed, the same rigid antisepsis of hands and instruments is required.

The physician in charge of the lying-in woman should keep his finger-nails cut short and scraped; they should be scrubbed with the nail-brush and soap-suds. The sleeves must then be rolled up and fastened above the elbows, and the hands and forearms scrubbed with hot soap-suds, and the hands dipped in a 1:500 sublimate solution; then, when examinations are to be made, the fingers and the back of the hand should be greased with boric vaselin. These are precautions which are regarded as indispensable by such distinguished obstetricians as Auvard and Tarnier, and, in fact, by all the best authorities all over the world.

The sublimate solutions should always be extemporized at the moment, and for this purpose the little tablets prepared by Parke, Davis & Co., Fraser, Killgore, and others, and which generally contain a little tartaric acid to favor solution, and a little coloring material, are very convenient. Fifteen of the one-grain tablets to a quart of filtered or boiled water makes the 1:1000 solution.

Instruments.—The instruments should be kept just prior to and during the operation (when not needed) in a boiled carbolic solution. They should always be sterilized before use by immersing them ten minutes in boiling water. After being used they should be plunged into cold water, which, by not coagulating albumin, renders them more easily cleaned.

Some, for greater precaution, pass their instruments through the flame of an alcohol lamp or sterilize them by the heat of a dry stove, before using. As far as possible, surgical instruments should be entirely of metal, as the horn or wood of the handles alters by heat and contact with water and presents less security than the metallic handle.

Most authorities regard the dry-heat stove as the best means of sterilization. The heat should not exceed 150° C. (300° F.), otherwise the temper of the instruments will be destroyed. The sojourn in the dry-heat stove should be half an hour. Instruments not metallic can be sterilized in a 1:1000 sublimate solution. Gauze (simple or iodoform) and absorbent cotton are kept in aseptic boxes hermetically closed. Sponges should undergo a quite special preparation, and then be kept in perfectly tight glass vases.

Simple Accouchement.—Preventive antisepsis during the last few weeks of pregnancy is a good precaution. It is absolutely indispensable if there are hæmorrhages or other discharges during gestation, whatever may be their cause; it is a fact of common observation that post-partum accidents are more common in women who have had leucorrhœal and other discharges during pregnancy.

During the first fortnight, then, the physician will see that the vulva is occasionally washed with soap and water, and that a vaginal injection of corrosive sublimate, 1:4000, is made. For these injections, a fountain syringe with hard rubber or celluloid cannula is desirable. The rubber fountain should hold at least two quarts. The cannula should not be too large for introduction into the uterus. The fountain or rubber sac is suspended on the wall a few feet above the bed so that the liquid may flow through the long rubber tubing by the force of gravity. A suitable tube-nipper will arrest the flow when desired.

At the moment of accouchement, the nurse will bathe the external genitals with soap and water and make an antiseptic sublimate injection. Whenever the accoucheur makes a vaginal examination he will take the same antiseptic precautions as before indicated and will grease the finger with borated vaselin. He will make as few examinations as possible. When the head appears at the vulvar orifice, he will have at hand a sublimate solution 1:2000, and wads of absorbent cotton dipped in this solution, with

which he will from time to time wipe the external genitals. If there be expulsion of fæcal matters, these are at once removed and the parts antiseptically cleansed. All the genital region within and without may be greased with the borated vaselin; this may facilitate the escape of the fœtus and protect the skin of the region. A careful cleansing of the valva will follow the delivery.

When the antisepsis has been well carried out during pregnancy and accouchement, the injections (even vaginal) will often be unnecessary after confinement. All that need be done is to keep antiseptic pads (wrung out in sublimate solution and dried) over the external genitals. Iodoform or corrosive-sublimate gauze will answer the purpose. If vaginal injections are indicated on account of the lochia becoming offensive, they may be made with the 1-per-cent. carbolic solution.

Application of Forceps; Version; and Other Operations.—All the operations necessitating the introduction of the hand or instruments into the uterus demand an antisepsis much more strict than does simple accouchement.

The woman being placed in the proper position, and rendered aseptic by the lavages and injections above indicated, the forceps are passed through the flame, then plunged into boiling water and greased with vaselin. When they are removed, after delivery, they are at once placed in cold water before being cleansed.

It is a good plan, after an application of the forceps, especially at the superior strait, to follow delivery by an intra-uterine injection of carbolic solution, 1:100.

In case of version, the hand and forearm to the elbow must be rendered aseptic, then greased with borated vaselin.

Lastly, when all is completed, there should be an antiseptic lavage of the vulva, vagina, and uterine cavity.

Tarnier, in one of his recent obstetrical lectures, has shown the brilliant results which have followed antiseptic midwifery: "Eight years ago [in the Maternity], out of 1340 lying-in women there were 33 deaths (a mortality of 2.50 per 100); to-day, with more rigid antiseptic care, the mortality has fallen to 1.04 per 100."

[Much more startling statistics could be furnished, if it were deemed necessary to compare present practice with the old-time practice. In fact, in all our leading lying-in hospitals, puerperal fever, once such a scourge, is nearly exterminated.]

Tarnier employs in his "Maternity" corrosive sublimate (1:5000); sulphate of copper (5:1000); permanganate of potash (½ gramme per 1000); phenic acid (20:1000); and lastly, microcidine (4:1000). He prefers the latter as the best known antiseptic after corrosive sublimate.

ANTISEPSIS IN OPERATIVE GYNÆCOLOGY.

The antiseptic precautions which concern the operator, his assistants, and his instruments, are the same as in instrumental obstetrics, and need not here be repeated.

Digital exploration should not be made until after washing of the vulva and vagina and an antiseptic injection. The exploring finger should be first well disinfected and greased with boric vaselin.

The speculum should be rendered thoroughly aseptic, and plunged in cold water immediately after being used. Then it should be cleansed, and wiped with a dry cloth, and immersed for a time in a strong phenic solution. In cases of vaginitis or of any venereal affection, it will be well, besides the other antiseptic precautions, to pass the speculum through the alcohol-flame.

The uterine sound and all the other instruments should be also rendered aseptic. These instruments should never be introduced into the uterus without an antiseptic vaginal irrigation, made with care, the speculum being in place in order that the injection may penetrate all the folds of the mucosa.

Dilatation of the cervix is made by means of prepared sponges or sea-tangle tents. These laminaria tents should be rendered aseptic by soaking them four days in a saturated solution of iodoform-ether, from which they are not removed until they are needed. Their application should be made with the same precautions as in the introduction of the uterine sound.

Vaginal and Uterine Topical Agents.—These are *tampons*, *suppositories*, *ovules*, *crayons*, strips of gauze, etc. *Tampons* are very much used in gynæcology, and are made of little

rolls of absorbent cotton or antiseptic wool, moulded to fit the vagina and tied, kite-tail fashion, with an aseptic string, and soaked in glycerin or any other medicated liquid. The string hangs outside the vulva, and enables the woman to withdraw the tampon after from twelve to twenty-four hours.

Suppositories have over tampons the advantage of melting slowly without leaving any other residue than that which can be removed by an injection. The following is a favorite with M. Auvard; it is to be employed in the sequelæ of accouchements with menace of septic accidents:

Iodoform, 1 gramme.
Glycerin, 8 grammes.
Cacao butter, q. s.

M. For one suppository. (This may also be useful in gynæcology.)

Ovules are destined to replace tampons and suppositories. They are made in moulds by the aid of glycerin jelly, and their forms are very varied. They are introduced by the patient, and generally kept in all night, *i.e.*, between two injections. They produce quite an abundant discharge. These ovules may be medicated with boric acid, tannin, iodoform, chloride of zinc, resorcin, salol, ichthyol, aristol, etc.

This kind of dressing exercises its action not only on the vagina, but on the uterus and its annexes.

Crayons, of harder consistence than the ovules and of another form, serve to introduce the antiseptics into the cavity of the cervix and of the uterus. Various antiseptics may be incorporated in them, as iodoform, ichthyol, camphorated salol, chloride of zinc.

Gynæcologists also introduce liquid caustics, as nitric acid, into the cavity of the uterus, notably in endometritis, in order to cauterize the mucosa and produce by a chemical process an eschar which replaces mechanical curettage.

Antiseptic gauze (iodoform, corrosive sublimate) is also employed to tamponade the vagina, and even the uterus, in *post-partum* hæmorrhages, and in gynæcology after curetting. It acts as an antiseptic and as an obturating and protective tampon.

Curettage of the Uterus.—This operation, which necessitates taking chloroform and bringing down the uterus to the vulvar orifice, is of very frequent performance in gynæcology.

The cervix is first dilated with iodoform laminaria tents, or the steel dilator of Ellinger or Sims. All instruments must be thoroughly aseptic, and vulva, vagina and cervix must before and during the operation be irrigated with sublimate solution (1:2000 or 1:4000).

After curetting is completed, the uterus is swabbed out with a solution of creasote and glycerin (one part creasote to five parts of glycerin). A platinum uterine probang serves for this purpose. Then a final lavage of the uterus and vagina is made with a stronger sublimate solution (1:1000). A strip of iodoform gauze impregnated with glycerin is then carried up to the fundus uteri, and the extremity allowed to hang out of the vagina. An iodoform tampon is then placed in the vagina through the speculum, and left there for three days; at least, it is not removed until it is soaked with the discharge. Iodoform is, thus far, the best antiseptic in our possession for shielding the parts from the septic influence of these discharges and for staying the production of pus in general. For this purpose, despite its disagreeable odor, it is still to be preferred in gynæcological operations.

PICHI (FABIANA IMBRICATA), A REMEDY FOR DISEASES OF THE URINARY ORGANS.*

BY DR. M. FRIEDLAENDER.†

Since time immemorial Pichi has been employed by the people of Chili in all possible bodily ailments, but especially in diseases of the urinary passages; and that the popular instinct has not been misled in this instance is shown by numerous treatises prepared in foreign lands, particularly in America, which ascribe to the drug a decidedly favorable action in cystitis, prostatitis, nervous irritability of the bladder, and hyperæmia of the prostate. A. Murillo, in his work entitled "Plantes Médicinales du Chili," discusses this plant very thoroughly. He describes it as a small shrub with a profusion of branches,

* Translated by Joseph Helfman from Therapeut. Monatshefte, p. 350, July, 1893.

† From the clinic of Dr. Lassar.

the wood being very hard and the bark rough and uneven. The leaves are very small and ovate, with blunt apices; the blossoms small, white, standing single at the ends of the young branches. The shrub occurs in greatest abundance on the banks of rivers and brooks. Murillo quotes more than a dozen cases of chronic and acute urethritis, as well as severe suppurative cystitis, which resisted every other treatment and yielded to a decoction of pichi. He states that several (though not well authenticated) cases of stone were cured by the remedy. Be this as it may—even ascribing a goodly portion of the brilliant properties of the pichi shrub to the exotic phantasy of the reporter, enough remains, nevertheless, from the favorable and harmonious reports of all investigators, to justify a trial.

Under the direction of Prof. Schmiedeberg, Dr. E. Holländer in 1890 succeeded in obtaining, through extraction of the drug with a mixture of water and alcohol, a thick, brownish, crystalline mass which, after purification, proved to be a resin-acid; further, the presence of tannin, as well as of a glucoside and alkaloid, was determined, but it was not found practicable to produce the latter in a state of purity for physiological investigation; experiments on frogs with the resin-acid resulted in successive narcosis, paralysis, and death.

Experimenting with the fluid extract the writer found that 15 to 20 grammes had no unpleasant after-effects, causing no nausea, eructation, or other gastric disturbances. On the contrary, the appetite was improved, the desire to urinate became less frequent, and, in a slight measure, the aroma of the extract was imparted to the urine; the tannin reaction could not be obtained.

After this preliminary test on a healthy subject, the extract was administered to the sick, suffering from diseases respecting which we already had favorable reports—cystitis, prostatitis, neuroses, acute gonorrhœa, epididymitis—all, diseases which have ever been treated internally.

Each patient received thrice daily one teaspoonful of the fluid extract with or without sugar. There was no complaint about the taste or about any gastric troubles, as is almost the rule with balsam copaiba or sandalwood oil; nor were any renal disturbances or skin eruptions observed.

The action of the remedy on the disease itself was, in general, satisfactory; at times it was surprising, as will be seen from the following:

1. Mr. S——, æt. 52; complains of great craving to urinate nights; must get up three times every night; has been troubled for fourteen days. The urine is clear, abnormal ingredients not observable. Nervous irritability of the bladder diagnosed. Patient receives thrice daily a teaspoonful of the extract, other treatment being purposely omitted. After three days the patient is obliged to urinate but once each night; after three days more the cure is complete, and so remains despite cessation of the treatment.

2. Mr. M——, æt. 21; complains of swelling, violent pains, and flow from the organ, as also of great craving to urinate, which obliges him to pass water every half-hour during the day and four or five times during the night. Appetite is poor. Urine is very turbid, contains much pus and mucus, reaction is markedly alkaline. Diagnosis: œdema of the prepuce, acute gonorrhœa, acute cystitis. Patient receives thrice daily a teaspoonful of the extract. After four days the patient is able to retain the urine four hours throughout the day, at night he is not obliged to get up more than twice, the reaction of the urine is very acid. After five days more, pain has vanished from the organ, the œdema has disappeared, the urine is perfectly clear, very acid; the craving to urinate gone, appetite again restored.

3. Mr. H——, æt. 58 years; complains of severe pains in the lower abdomen, loins, and perineum; frequent craving to urinate; urinates with difficulty. The urine is very turbid, malodorous, very alkaline; the prostate as large as a fist. Diagnosis: hypertrophy of the prostate, chronic cystitis. Patient receives thrice daily a teaspoonful of the extract. After three days the urine is clearer, not malodorous, acid reaction, but the troubles caused by the prostate are not relieved.

4. Mr. Sch., æt. 23; complains of violent lumbar pains which extend to the neck and become severer at night. The left lobe of the prostate is enlarged and contains a num-

ber of hard gatherings which hurt when pressed. Diagnosis: ominous chronic prostatitis. Patient receives thrice daily a teaspoonful of the extract; after four days the pains in the loins have been very much mitigated; four days later they are completely subdued.

5. Mr. Sch., æt. 21; complains of swelling of the organ, violent pains in urinating, and bloody, suppurative discharge. Diagnosis: acute gonorrhœa. Four days after administration of the extract, the pains are almost completely subdued, the œdema has vanished, the discharge diminished.

6. Mr. K——, æt. 32; complains of violent pains in the right testicle and in the right groin, severe lumbar pains, great depression, and complete loss of appetite. The right side of the scrotum is very red and shows œdematous swelling; the right testicle and epididymis are as large as a fist, very painful; prostate normal; slight discharge from the urethra. Patient has a sallow complexion and thickly coated tongue. Diagnosis: orchitis, epididymitis dextra, subacute gonorrhœa. Besides ordering the use of a suspensory, three teaspoonfuls of the extract *pro die* are prescribed. After seven days the lumbar pains have vanished, the right testicle is normal, the epididymis reduced one-half and almost painless, appetite and general condition very good.

From these few cases it is manifest that a favorable action cannot be denied to the fluid extract pichi in certain diseases of the urinary organs—diseases which are attended with considerable secretion of pus, like acute gonorrhœa and cystitis. The activity of the remedy in such instances is doubtless conditioned by the large content of resin-acid and tannin. For the present we cannot decide whether its anodyne and calmative properties proceed from its alkaloid (as yet uninvestigated), or must be referred to the resin-acid, which, in the experiment on a frog, produced a pronounced narcosis. Of course, we have no right to expect that the remedy will be capable of superseding direct local treatment with injections or washings, but it will render good service in all cases in which the local treatment, as in gonorrhœa with epididymitis, is impossible, or in which it may be reinforced by internal medication. In such instances the fluid extract possesses a great advantage: as a bitter tonic and aromatic it stimulates the functions of the stomach. This is an important consideration in cystitis, which is almost uniformly attended with gastric disturbance, since with this one remedy we can exert a concurrent and favorable action on bladder and stomach. The fluid extract of pichi, accordingly, seems destined to supersede the remedies hitherto in vogue, such as balsam of copaiba, sandalwood oil, and terebinth oil, to which, while not possessing their noxious and disagreeable properties, it is not inferior in virtue. At all events it will form a valuable addition to our materia medica.

THE SUCCESSFUL MEDICAL PRACTITIONER.

BY JAMES R. WALLACE, M. D.

Many a worthy man is disappointed in the career which he has chosen in life; but many others are disappointments to the world or to their professional brethren. These last often start life with every favoring wind to fan them on to fame and fortune, but the rising lights to which good friends proudly pointed as being certain to quickly burst into grand effulgence, often sink into darkness and oblivion. And why? There are two great causes of professional failure: (1) making work subordinate to pleasure, and (2) disregarding those rules, written and unwritten, which should guide one in professional and social relations. With the medical man there is a third potent cause of failure, and that is the absence of a tenderness of action and of a kind and ready sympathy with all those whom he is called to help professionally. All the advantages of superior medical training, excellence of bearing, skillful manipulation, etc., are of little avail if unaccompanied by gentleness of manner and of touch, and whatever will make your patient realize that you feel for him or her.. The medical practitioner, then, to be successful must lay to heart these three rules at least: (1) Business first, then pleasure; (2) To be a respector of the Ethical Code; (3) To be gentle, kind, and sympathetic.—*Indian Medical Record.*

Correspondence.

PAN-AMERICAN MEDICAL CONGRESS, TO BE HELD AT WASHINGTON, D. C., SEPT. 5-8, 1893.

Washington City is reached by the Chesapeake & Ohio Railway, the only route combining the most picturesque scenery and the most interesting localities, with the perfection of train service and track.

The Chesapeake & Ohio Railway is a direct line from Cincinnati to Washington, and from Louisville and Lexington to Washington, and through its connections it offers the most desirable route for time, smoothness and equipment from St. Louis, Chicago, and other cities of the West, Northwest, and Southwest, to the National Capitol.

The F. F. V. Vestibule Limited is one of the famous trains of America. It is lighted throughout with electricity, and carries a through dining-car from Cincinnati to Washington and New York. Through palace sleeping-cars run between Chicago and Washington *via* the Big Four and Chesapeake & Ohio route, and arrangements will be perfected for running through sleepers from St. Louis to Washington to accommodate visitors to the Pan-American Congress.

The F. F. V. leaves Cincinnati at 6:15 P.M., after arrival of trains from St. Louis. It leaves Louisville at 2:30 P.M., and Lexington at 6:15 P.M. The Washington Express leaves Cincinnati at 8 A.M., and Lexington at 7:15 A.M. The Washington Express is also a vestibuled train lighted with electricity.

The Chesapeake & Ohio crosses the river at Cincinnati over its double-tracked $5,000,000 bridge. It follows the banks of the Ohio River for 160 miles to Huntington, W. Va., passes through Kanawha Valley within view of Kanawha Falls, penetrates the cañon of New River, follows the picturesque Greenbrier, passes White Sulphur Springs, crosses the Alleghany and Blue Ridge Mountains, Shenandoah Valley, and the Piedmont section of Virginia. The view of Piedmont Valley from the train after emerging from the tunnel through Blue Ridge Mountains, is not surpassed in America for harmony of color and delicacy of tone. The elevated position of the track offers a view of forty miles of remarkably fertile valley, broken frequently by the foot-hills of the Blue Ridge.

After passing Charlottesville and Gordonsville, the route to Washington is through Culpepper, Warrenton Junction, Manassas, Bull Run, and other of the more famous battle-fields of the late war.

Old Point Comfort, reached only by the Chesapeake & Ohio Railway, offers a delightful side trip, as does also the Natural Bridge, one of the most beautiful, as it is also one of the most wonderful, formations of nature.

Richmond, Virginia, on the line of the Chesapeake & Ohio, is the most interesting of all American cities in historical associations.

White Sulphur Springs, the Warm, Hot, and Healing Springs, with their celebrated baths, may also be visited *en route*.

Virginia is the most fertile touring ground of America, and the Chesapeake & Ohio is the tourists' route.

For excursion rates and "Virginia in Black and White," free, address U. L. Truitt, Special Agent, 234 Clark St., Chicago, Ills.; E. B. Pope, Western Passenger Agent, cor. Chestnut and Broadway, St. Louis, Mo.; A. S. Miller, Traveling Passenger Agent, Indianapolis, Ind.; R. E. Parsons, City Passenger Agent, 253 Fourth Ave., Louisville, Ky.; D. E. Holmes, City Passenger and Ticket Agent, Cincinnati, Ohio.

H. W. Fuller, General Passenger Agent, Washington, D. C. C. B. Ryan, Assistant General Passenger Agent, Cincinnati, Ohio.

NOTES ON CASCARA SAGRADA.

1. Manufacturing druggists have of late been endeavoring to rid cascara of its disagreeable bitterness, and so present an article which should be palatable as well as efficient. While it is possible that as regards its laxative properties this may be accomplished (though my experience of such preparations does not confirm the claim), yet if this can be done successfully, it is, as I have reason to believe, at the expense of some valuable qualities. Its primary action on the stomach, duodenum, and liver is by many disregarded or overlooked—they look only for its effect on the lower bowel; but this first action of the drug is in many cases its most

important, and depends upon some constituents which are sacrificed in the attempt to make a pleasant medicine. Beyond this, I think that the peristaltic action is decreased by any process which deprives it of its bitterness, so that the "improvement" is in taste and not in any actual value. Be that as it may, the "stomachic" and tonic effects are destroyed, and thereby one of the most precious of its properties.

2. But it is more particularly to its value as an anti-rheumatic that I would call attention. Mrs. S——, a subject of arthritis deformans, after having had, as most such subjects have, a wide experience of physicians, and being none the better for their efforts, came under my care. I placed her on the use of arsenious acid, and with perceptible benefit; this was continued for several weeks, until it seemed to be of no farther avail. Constipation, due to her enforced sedentary habits, was constant and obstinate. Being about to leave her for several weeks, I prescribed fluid extract of cascara. On seeing her afterwards, I was very much surprised to find her much better and very earnest in praise of that "last medicine," which both she and her husband declared had done her more good than anything she had taken. As they had not been led to expect any benefit except for the constipation, this was not owing to "suggestion." I do not anticipate a cure, but thought it sufficient evidence of its power in this direction to be reported for the notice of other physicians. I had seen in the journals something to that effect, but had placed no reliance on it as a remedy for rheumatism. I may say farther, that this benefit has continued until the present time, and can have been due to nothing else, as she was taking no other medicine, and the improvement began in the most unfavorable season, winter and spring.

H. A. Carrington, M.D.
Bristol, Conn.

A CHANGE OF BASE.

Prof. Christian Fenger, formerly professor of surgery at the College of Physicians and Surgeons, has been elected to, and has accepted, a chair of surgery and clinical surgery at the Northwestern University Medical School.

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

Regular Meeting, May 18, 1893.

J. J. Mulheron, M.D., addressed the Society on "Antiseptic Midwifery." He said: Few physicians follow out and give their patients the full benefit of all the contributions to antiseptic midwifery. Physicians that I have spoken to upon this subject have excused themselves for not so doing, by saying that "it's meddlesome midwifery, and what nature has been doing for these long years is the best treatment." We forget, when we so say, that woman is not in her natural environment, and in our grandest homes we find her far from her natural state. The woman of to-day is quite artificial. It then becomes us to give this woman the benefit of all the advances that come to us as scientific men. In the natural state the woman is not invaded by the gonococcus or streptococci that go up the vagina and perch themselves upon the endometrium and meander through the female generative organs. Here the remedies that we know are destructive to these bacteria ought to be used by us.

Antiseptic midwifery commences at the time the woman *knows* that sometime she will become a mother; right here her physician starts his antiseptic treatment. The physician that attends a case upon no notice does injustice to his patient and himself.

Commence by first correcting her surroundings. Look well to her alimentary canal, and see that there are no nephritic troubles. I would hate to attend a woman with swollen legs and puffy eyelids, as such a woman would have some desquamation from the kidneys. It has become my routine practice to attend to the kidneys, and for the last two months of the gestative period to give buttermilk or skim-milk—these for their emollient, soothing, and otherwise beneficial effect.

Labor has begun: where is the surgeon that will fail to prepare his patient for an operation? There is to be more or less abrasion and solution of continuity. The keynote of antiseptic midwifery is to prevent the ingress of streptococci; and this is no mean matter. When there are facilities, give a complete bath, or when not, bathe the gen-

itals with a HCl solution, 1:10000, and give a warm antiseptic vaginal douche. The examinations should be made with an antiseptic hand, and the physician that fails to do this reduces his patient's chances for life. After this examination the fingers, hand, and person of the surgeon should be treated antiseptically so as to prevent the carrying of septic material to another patient.

After this first examination, which should be made in order to acquaint the physician with the condition of the vaginal canal, pelvic bones, and cervix, let the patient severely alone for an hour at least, and then only examine to determine the progress of labor. All these examinations should be made with a hand that has "been treated."

After delivery, the external genitals should be carefully examined, and if found lacerated should be stitched at the time; I think the best material for this purpose is silkworm-gut, being aseptic and less apt to cut out—no force or traction on the cord. By expression of uterus, with its contractions, you get the placenta and membranes more nearly intact. This firm contraction prevents invasion of uterus by bacteria. Ergot should never be given while the child or placenta is *in situ;* but better than that is quinine, in doses of 5 grains every four hours, as it prevents the escape of the white blood-corpuscles and acts on the unstriated muscular tissues.

Antiseptic douche after delivery is good.

I have not permitted the use of the bed-pan in the lying-in room for over ten years, and will never permit its use again. I allow the woman to be raised up and to sit erect on the ordinary chamber-pot when she voids her urine or fæces. In this position the vagina empties itself of the accumulated lochia. In addition to this, I have the woman lie most of the time in the semiprone (Sims) position. This position, besides favoring drainage, permits the uterus to fall forward where it belongs, and guards against the danger of retroversion, to which the woman who is kept constantly on her back is peculiarly subject.

Discussion.

Dr. S. G. Shattuck: As regards antiseptic care, the hot-water bathing of hands is the first thing we ought to do on entering the chamber of our patient, and I think this quite sufficient.

Dr. C. Henri Leonard: I have been in the habit for the past few years of giving quinine in doses of 2 to 4 grains in all of my gynæcological operations. I do this to prevent the amœboid movement of the white blood-corpuscles, and I have found it a good practice. So I can see how it would be good in obstetrical work.

Dr. K. Gunsolus: The patient's room and surroundings should be attended to. Complications cannot always be traced to auto-infection. The stomach, as well as the lungs and alimentary tract, may become the avenue of infection. As regards ergot, I agree with Dr. Mulheron, that it produces irregular contractions. I allow the patient all freedom in bed in moving from side to side. My favorite prescription is biborate of soda and quinia sulph., of each 5 grains.

Dr. C. O. Armstrong: When the general bath cannot be obtained, I believe in the local genital bath, followed by the pinning of an antiseptic sheet about the thighs. I am not in the habit of douching the vagina immediately after the birth. When occasion demands it, I use boracic acid.

Dr. D. Dakin: I give quinine for its effect on the secretion of the milk, and also for the purpose of lessening the chances of fever.

Dr. Wm. C. Henderson: I do not believe that all small solutions of continuity need suturing. I think nature will take care of all but complete laceration of the perineum.

Dr. Milligan: Credé recommends a 1-percent. solution of nitrate of silver to be applied to the eyes of the babe upon delivery. So, from this, one would infer that some such vaginal injection would be good.

Dr. Samuel Bell: If the infecting germs are lying around, then the sheets, etc., should be subjected to the strictest antiseptic precautions. The position referred to by Dr. Mulheron is of European origin, but for obtaining the very best results I think the face position preferable.

Dr. Thos. Henderson: When the head of the fœtus is low down, and the pains cease, the woman is in a state of physiological rest. Here you must deliver as quickly as possible. In every case where I have been called by midwives, fever has ensued; the head has

been pressing down firmly upon the perineum for some hours. Why is it that we suture these ruptures of the perineum?

Dr. L. E. Maire: As some portion of the placenta is often left behind, it becomes the cause of infection. I do not believe there is a gentleman present that has seen a genuine case of puerperal fever. The drainage here is not the same as in an abscess. Here the uterus helps the discharge.

Dr. Richard Murphy: I don't see how the streptococci get in the uterine cavity. I give ergot as soon as the head has passed through the vulva. I use quinia sulph., 4 grains every three or four hours. Soon after delivery I allow my patient to be somewhat elevated in bed, once or twice a day.

Dr. Honner: Antiseptic midwifery shows its best results in hospital practice. This I have found in the London Hospital (Ontario), which is no exception to the general rule. Personally, I am not clear on the use of the douche, as regards when it should be begun.

Dr. K. Gunsolus: How is it that in extra-uterine pregnancy and death of the fœtus, the mother lives and there is no puerperal fever? I believe that the vessels and the system generally are able to take care of the noxious changes taking place in the system.

Dr. J. Newell: I don't like ergot, as it appears to act too much upon the blood-vessels and the muscular fibres, and so pens up the secretions within the uterus.

E. B. Smith, M.D.,
Secretary.

AN EDITORIAL PRELUDE.

The American medical editors will have a meeting and banquet in Washington on the evening of Monday, Sept. 4th, the day preceding the assembling of the Pan-American Medical Congress.

Dr. I. N. Love, of the Medical Mirror, 3642 Lindell avenue, St. Louis, has been appointed chairman of the Committee of Arrangements for Banquet.

It is earnestly hoped that every medical editor of all the Americas will endeavor to be present on the interesting occasion. Those contemplating attendance should address the chairman of Committee of Arrangements promptly.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., AUG. 25, 1893.

Editorial.

AMENITIES OF PROFESSIONAL COURTESY.

"Minuti semper et infirma est animi exiguique voluptas ultio."* Especially is the aphorism of the great satirist manifested in an "Open Letter" to Prof. Hobart A. Hare, under date of August 18, 1893, now being widely disseminated by William A. Hammond, a copy of which has just come to hand.

Professor Hare is abundantly able to defend himself against any and all animadversions; but there are certain suggestions embodied in this "open letter" that bear strongly on the interests of truth, honesty, and the general good of the profession.

1st. Dr. Hammond herein asserts he has "never received one dollar from the Columbia Chemical Co., for the sale of animal extracts, nor from the sale of anything else they manufacture." The natural query, knowing the uncertain and shifty character of the man, is, whether he has received *more than one dollar*. As a matter of fact, the ex-Surgeon-General is *President* of the Columbia Chemical Co., and held the same office in the same concern under its old title of Health Restorative Co., since 1891, and the capital of the organization is claimed to be $250,000, with however only about $10,000 in actual assets outside of good will and trade-marks. Certainly Dr. Hammond does not lend his name, or give the products of his "own laboratory," for nothing. As chief officer he is *prima facie* chief stockholder, hence he must have received remuneration for trade-marks, etc., in the way of stock at least.

2d. Dr. Hammond declares there was no imposition upon the editor of the New York Medical Journal—intimating the real import

*"Revenge is always the weak pleasure of a little and narrow mind."—Juvenal.

of the articles on organic extracts was known to the latter gentleman, Dr. Foster. In this respect possibly Dr. Foster may have been the victim of "commercialism." As we are not the keeper of conscience of either Dr. Foster or Dr. Hammond, they can settle this question to their mutual satisfaction.

3d. Hammond declares his article on "Organic Extracts" was published several months before the sale of said extracts was placed in the hands of the Columbia Chemical Co., and that:

"This last was done in accordance with the requests from hundreds of physicians (whose letters are now in my possession) to be supplied with the extracts as made by me under my personal supervision. I had no idea at the time of publication that my investigations would attract the one-thousandth part of the attention that was given them," etc.

Is this what Dr. H. in his modesty would term a solecism against fact and honesty? How was it, if *six months* is required for the manufacture of these extracts, that he, through the Columbia Chemical Co., was able to supply Cerebrine *et al.* as early as April 1st–15th —less than three months after the publication of the article in the New York Medical Journal (Jan. 28th)? And if he "had no idea his investigations would attract one-thousandth part of the attention that was given," how was he able to look into the future and provide for this enormous sale?—especially since, while Cerebrine requires only *six* months maceration, Cardine requires *eight*, and all the "extracts" should, he declares, preferably be macerated for one year!

It strikes us this is more than an anachronism—perhaps it might be politely termed an evidence of chronic *heterophemy*. Any claim to unpremeditated intent to secure free advertising, and to foist "Organic" or "Animal" extracts upon the profession, *willy nilly*, is certainly rendered invalid by the evidence furnished by Dr. Hammond himself. More, the *exposé* in the Medical News of August 26th and Journal of American Medical Association of like date, is conclusive of anything but purity and honesty of purpose.

SOPHISTICATED "CEREBRINE (HAMMOND)."

We call attention to the reproduction in our Progress columns of a communication appearing in the Aug. 26th issue of the Journal of the American Medical Association, which substantially declares that "Cerebrine (Hammond)" and "Medulline (Hammond)," "prepared under the personal supervision" of the "Surgeon-General (retired list)" are not what they pretend: that they are, in fact, sophisticated with nitroglycerin.

If the foregoing is true, is it not a logical assumption that the proprietor of "Cerebrine," *et al.*, despairing of attaining financial success through harmless and inert medicaments aided by "suggestion" (especially since the exposure of the true character of so-called "animal extracts" by Doctors Stockwell, Waugh, and others), has now resorted to even more questionable measures: that to ensure the increase of pulse, temperature, etc., claimed to succeed upon the ingestion of minute doses of these "extracts," he has found it necessary to invoke the aid of a powerful and dangerous remedy, which possibly he imagined was not amenable to chemical test? Will the proprietor now claim that he diets his bovines on nitroglycerin: or are we to believe this result was made possible through accidental selection of material from a cow that had succumbed to suicidal mania?

The earlier "animal extracts" exhibited a plain label printed in black; those more recently issued have the *fac-simile* of Hammond's signature stamped across the label, and these latter presumably mark the newer or sophisticated productions.

Every physician on this continent, in the interests of science and humanity, as well as to relieve Dr. Hammond from the painful rôle of martyr, ought to take up the investigation of "organic" *nee* "animal" extracts. We trust such will be done, and each individual speedily procure an ounce—though perhaps this is too much, considering the *long* price asked for a single drachm—and subject the same to careful study and analysis. If the earlier "Cerebrine (Hammond)" proves to be inert, and that now upon the market bearing the lurid *fac-simile* endorsement gives evidence of being a powerful heart-stimulant, it may reasonably be concluded that the mode of preparation has materially changed since the first glowing account was published in January last. And if the claims made in the Journal of the American Medical Association

by Delafontaine and Brower are just, no punishment however severe will be adequate penalty for the crime of wantonly and dangerously trifling with human life and suffering.

We cordially invite reports of experiences with "animal extracts" (Hammond), to be published in this journal, without fear or favor, regardless of character.

GEORGE M. STERNBERG.

Doctor George M. Sternberg, Deputy Surgeon-General U. S. Army, is Director of the Hoagland Laboratory, honorary member of the Epidemiological Society of London, the Royal Academy of Medicine of Rome, of the Academy of Rio de Janeiro, and of the American Academy of Medicine.

He has received many other honors.

On Dec. 1, 1875, Dr. Sternberg was promoted to be Major and Surgeon, and, after a short absence from duty on sick-leave, was made Attending Surgeon at the headquarters of the Department of the Columbia, May to December, 1876. From that time until May, 1879, he was Post Surgeon at Fort Walla Walla, Washington Territory, and saw further duty in the field during the Nez Percés campaign in 1877, when he was mentioned for "heroic conduct."

After this, having previously earned much reputation as an authority on yellow fever, he was made a member and secretary of the Havana Yellow Fever Commission of the National Board of Health, and continued therein until 1881. He then went to the Department of California, and was Post Surgeon at Fort Mason, California, until May, 1884. Afterwards on duty at Baltimore, Md., and in charge of Medical Surveying Department, San Francisco, to February, 1892, being made Lieutenant-Colonel and Deputy Surgeon-General, January, 1891. Since the early part of 1892 until the present time Dr. Sternberg was Attending Surgeon at New York City. Last year, during the cholera season, he was appointed Consulting Bacteriologist to the Health Officer of the Port of New York, in compliance with special request. Previous to that time he was on special duty as delegate from the United States to the International Sanitary Conference of Rome, and detailed also to make investigations in Brazil, Mexico, and Cuba relating to the etiology and prevention of yellow fever. General Sternberg is a member and fellow of many medical and scientific societies in various parts of the world, and has published a number of works and valuable treatises upon medical and scientific subjects. He occupies a high position among his brother officers, and is well known to the medical profession. The position now occupied by him is the highest one in the Medical Department of the Army, and carries with it the rank of Brigadier-General.

COINCIDENCE OR PLAGIARISM?

The claims of proprietorship in the trademarked name "Cerebrine," asserted by a certain ethical (?) physician of prominence, impart a more than usual interest to the literature issued in English more than a year ago by the well known French chemist, Eugene Fournier. The circulars before us dwell on the alleged virtues of a preparation which Mr. Fournier terms *Cerebrine*, and which has for its essential constituents cocaine, theine, and (in very small proportions) analgesin. The *Cerebrine* of Mr. Fournier was employed *under that name* in the Bicêtre Hospital *at as remote a time in the past as 1886* by the well known Dr. Voisin. Dr. Ad. Piechaud reports on his use of the same preparation in May, 1889, and, among others, Dr. Lambert experimented with Fournier's Cerebrine in 1889 and 1890. The manufacturer, while claiming a certain value for his product in neuralgic migraine, expressly disavows any identity between his *Cerebrine* and the nitrogenous substance found in large proportions in the nervous or cerebral matter, and *which Gobley had originally extracted from the yolk of eggs.*

Not less interesting and significant is the further fact that this principle—*the Protagon of Liebreich, the Cerebrine of Gobley*—has been finally examined by Prof. Bourgoin. In the pure state it contains no phosphorus; it appears to be an amide, derived from an acid or an aldehyde, and *possesses no therapeutic property of any kind.*

When a reputable French chemist has employed a certain name for more than *six years*—a name, too, with which all students of cerebral physiology were more or less

familiar—and the same name is then applied by an American physician to a proprietary preparation of questionable value, is it not reasonable to query: Coincidence or plagiarism?

If this statement embodies any injustice to the ex-Surgeon-General ("Retired List"—without pay), he will doubtless seek redress in a suit for infringement, against Messrs. Caswell, Massey & Co., the American agents of Mr. Fournier.

Will he sue? Not if he is wise!

ANIMAL EXTRACTS.

The editor of the Ohio Medical Journal, James M. French, M.D., in the August number, comments on Cerebrin. He says:

Not long ago it was announced that a prominent Eastern physician had, after patient labor, succeeded in isolating a peculiar chemical substance from animal brain, testes, etc.

The inventor or discoverer of the substance and the original process now claims the right to manufacture the article, and that he alone is entitled to the use of the names given to the substances he manufactures.

Shortly after, the enterprising firm of Parke, Davis & Co. announced, in this journal among others, their ability to furnish the substance, prepared by their own improved process.

It is highly probable that the substances are valuable chiefly from a commercial standpoint, and solely to the manufacturers; but the reputation of Messrs. Parke, Davis & Co. is such as to guarantee that any article prepared by them, by whatever process, will compare favorably with all similar articles, wherever manufactured.

The claims recently made for the "Animal Extracts," sometimes otherwise designated as "Physiological Extracts," border so closely on the ridiculous that it is often difficult for the recipient of a communication about them to tell whether the writer is serious or facetious. The following letter, received by a manufacturing concern, is a type:

GENTLEMEN: I would like to have you make for me an ounce of extract of rooster's semen according to Prof. Hammond's method for preparing animal extracts. I want the rooster's semen taken from fresh hen's eggs and I want each six minims of the extract to represent the semen from one egg. What will be the cost?

Book Notices.

A CHAPTER ON CHOLERA FOR LAY READERS: History, Symptoms, Prevention, and Treatment of the Disease. By Walter Vought, Ph.B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry St.

This "chapter" contains subdivisions treating of the history, causes, symptoms, diagnosis, prognosis, treatment, and prevention of cholera, with special notes on hygiene, quarantine, and disinfection, and three or four plates of cultures of cholera bacilli, in one of which the development is compared with that of the Finkler-Prior bacillus. The brochure is a very readable one, and its wide distribution among lay readers would serve to disarm their groundless fears while stimulating to a rational enthusiasm for cleanliness and care in combating the inroads of the dread disease. Especially salutary would such an influence be if applied to municipal, State, and national assemblies.

ACOMETRIC SYLLABUS. BIOLOGIC THERAPEUTICS.

We are in receipt of these two brochures from Parke, Davis & Co.

The first-named work embraces 42 closely printed pages giving diseases, and indications in each, which may be met by the use of diurnules and diurnal tablet triturates. It will be of much interest to practitioners requiring a system of medication involving the most certain remedies in the minutest form.

Under the head of "Biologic Therapeutics" are furnished reprints of the lecture of Hector W. G. Mackenzie, M.A., M.D. (England), on "The Treatment of Myxœdema and other Diseases by the use of certain Organic Extracts," also an illustrated paper by Edward Carmichael, M.D., Edinburgh, on "Cretinism treated by the Hypodermic Injection of Thyroid Extract and by Feeding," besides excerpts from prominent medical journals upon the use of the thyroid gland in therapeutics.

Either or both of these pamphlets will be mailed free to any physician applying to the firm for them.—*National Medical Review* for August, p. 95.

Notes and News.

John Hunter.—

The Royal College of Surgeons has been celebrating the centenary of the birth of John Hunter, as well as the jubilee of the institution of its fellowship. A large number of Hunterian relics have been exhibited, including a fine series of portraits of the Hunter family. Some of these have been lent, but the Royal College of Surgeons is itself the fortunate possessor of the celebrated portrait of John Hunter by Sir Joshua Reynolds. Although the founder of scientific surgery, John Hunter was of very humble origin, and was no doubt in a large measure self-taught. He was born in the parish of Kilbride, East Lanarkshire. The house is still standing, and remains pretty much as it was in Hunter's time. He was the youngest of ten sons. As a youth he is said to have worked as a carpenter in Glasgow, and, notwithstanding his attainments as a surgeon, it is certain that to the last he had very little acquaintance with the dead languages. He came to London about the age of twenty, and at 35 was not only settled in practice as a surgeon, but was also lecturing on anatomy. At the age of 65 he died suddenly, while attending a meeting of the Board of Governors of St. George's Hospital, and the sofa on which he breathed his last has been lent by the hospital authorities for the exhibition. At the time of his death Hunter occupied a substantial residence at Earl's Court, where his wife gave fashionable receptions. Mrs. Hunter, who had been a Miss Home, was in her way a remarkable woman. She had some reputation as a poetess; her songs were set to music by Haydn, and at least one of them, "My Mother Bids me Bind my Hair," is still popular.—*Chemist and Druggist*, July 22, 1893.

Preventive Medicine at Oxford and Cambridge.—

According to the London Lancet, Oxford, following in the wake of Cambridge in recognition of the great importance of preventive medicine, promulgates a statute enlarging her degree of Public Health. There will henceforth be an annual examination by four examiners presided over by the Regius Professor of Medicine. The subjects will comprise: (*a*) General Hygiene; (*b*) General Pathology, with special reference to infectious diseases; (*c*) Laws relating to Public Health; (*d*) Sanitary Engineering; (*e*) Vital Statistics. Every candidate must have been registered for a year, must have spent six months working in a public health laboratory, and another six months as assistant to a health officer of a town or county of at least 50,000 inhabitants.

There are times, especially during threatened epidemics, when the proverbial "ounce of prevention" is worth a ton of cure.

Which of the advanced American medical schools, and which of the great American universities, will be the first to recognize the vast importance to the general public of preventive medicine by following on this side of the Atlantic the commendable lead of the two ancient and renowned universities of England?—*The Dietetic and Hygienic Gazette*, July, 1893.

Detroit College of Pharmacy.—

This educational institution, which was organized in 1890, has very desirable and commodious quarters in the new building of the Detroit College of Medicine, large and convenient rooms being used for the pharmaceutical students for lectures and laboratories. The lectures and part of the laboratory work are done in the evenings. Preliminary examination or its equivalent is necessary to enter; mid-winter as well as final examinations are given, and for final success the standing is based on attendance and standing in recitations, diligence and success in practical work, proficiency in final examination. Good character, 21 years of age, and two full terms at college of pharmacy, are necessary, as well as the previous requirements stated. The faculty are: J. E. Clark, chemistry; E. J. Kennedy, pharmacy; G. Suttie, botany; L. H. Gardiner, materia medica and pharmacognosy; E. C. Skinner, pharmacal jurisprudence; with assistants in chemical and pharmaceutical laboratories and dispensing department. The expense of the two sessions is about $100, with opportunities of extra chemical work if desired. The session fills seven months. For prospectus address E. C. Skinner, Detroit College of Pharmacy, Detroit, Mich.

A Bureau of Public Health.—

The American Medical Association has created a committee which is charged with the duty of promoting the establishment of a Bureau of Health, and now a sub-committee of the National Quarantine Committee of the New York Academy of Medicine has prepared the sections of a bill organizing a Bureau of Public Health, which is tentatively submitted for the purpose of eliciting a full and free discussion of the subject before the precise form to be adopted is finally decided upon. The bill provides for the grouping of the States and Territories into nine sanitary districts, and the establishment of a commission of fifteen, of whom eleven are to be appointed by the President, one from each district, and two at large, the other four members to be the Surgeon-General of the Army, the Surgeon-General of the Navy, the Supervising Surgeon-General of the Marine Hospital Service, and an officer, learned in the law, detailed by the Attorney-General from the Department of Justice. Argument seems superfluous. A Bureau of Public Health is indispensable to the welfare of the country. This once admitted, the details of organization and execution will demand separate consideration.—*Medical News*, July 22, 1893.

A Change in the Chair of Gynæcology.—

Dr. William Goodell, Professor of Gynæcology in the Medical Department of the University of Pennsylvania, presented his resignation to the trustees, because of the growing demands made upon him by his private practice. At a meeting of the trustees, held May 19, 1893, it was resolved "that the resignation of Professor Goodell from the chair of Gynæcology be accepted with regret and with the assurance of the high appreciation by the Board of Trustees, of the ability and fidelity with which he has fulfilled his duties; that there be now created an Honorary Professorship of Gynæcology, with the right of lecturing attached, and that Professor Goodell be nominated thereto." At the stated meeting held June 6, 1893, the Board of Trustees unanimously elected Dr. Goodell Honorary Professor of Gynæcology, with the right of lecturing.

At a recent meeting of the Board of Trustees of the University, Dr. Charles Bingham Penrose was elected to fill the vacancy created by the resignation of Dr. William Goodell.—*The University Medical Magazine*, August, 1893.

Death of Dr. Ross, of Saginaw.—

On Monday, July 26th, Dr. Benjamin B. Ross, one of the best known and most skillful physicians of Saginaw, died at his residence, at the age of 55. His last illness was of ten weeks' duration, caused by acute suppurative nephritis, following a general decline of constitutional vigor. Dr. Ross had resided in Saginaw twenty-nine years. He was one of the prime movers in the establishing of St. Mary's Hospital, and had served the municipality both professionally and politically. The funeral was held under the auspices of St. Paul's Episcopal Church and St. Bernard Commandery No. 16, K. T., and pavilions had to be erected in front of the family residence to shelter the overflow of friends who came to pay the last tribute of respect and love. At a meeting of the physicians and surgeons of Saginaw held on the evening following the funeral, and largely attended, resolutions of regret, appreciation, and condolence were adopted.

The Active Principle of Male Fern.—

According to Prof. Kobert, the active principle of the male fern is not only in the filicic acid, but also in the essential oil, which forms a kind of loose compound with the fatty acid. This mixture, or compound, is easily emulsified in the intestine, and exercises a stupefying action apon the tapeworm, which is then expelled by a laxative. The ethereal extract of male fern should be prepared from the rhizomes gathered in the autumn, for the spring collection is less certain in its action. —*Pharm. Zeitschrift* (*American Druggist and Pharmaceutical Record*, July 27, 1893).

Tetanus Cured by Tetanus Antitoxine.—

Another case of tetanus successfully treated by Tizzoni's antitoxine has been reported by Magagni. The patient, a man aged 27, was discharged as cured twenty-eight days after the first appearance of the symptoms.—*Modern Medicine*, July, 1893.

Therapeutic Brevities.

Massage of the Prostate Gland.—Thure Brandt, the famous Scandinavian masseur, and the originator of pelvic massage as a means of relieving certain disorders of women, has made an application of the same principles of treatment to certain forms of genito-urinary diseases in men, particularly enlargement of the prostate gland. It is evident that by means of the application of massage to the gland the absorption of pathological products may be stimulated, and by an improvement of the nutritive condition of the tissues it is possible that the hypertrophy may be relieved. The application is simple: the patient having emptied the bladder, the index finger lubricated with vaseline is introduced into the rectum of the patient, and with the top of the finger gentle pressures and frictions should be made upon the gland. Brandt directs that the pressure should be made from within upward—that is, toward the pubic arch. Volianski directs that the movement should be in the direction of the bladder, or with the lymphatic current. The application should continue for from one to three minutes. A number of cases have been published illustrating the benefits to be derived from this application.—*Modern Medicine*, July, 1893.

Corn Silk.—According to Dr. E. Stuver, of Rawlins, Wyo. (American Therapeutist), this drug has a decided demulcent, anæsthetic, diuretic effect. Its most beneficial results are obtained in acute, irritated, and inflammatory conditions. It has a decided influence in the acute stage of gonorrhœa. Good results follow the use of a pure, fresh, and active preparation only. Londrieux concludes that the various preparations of the stigmata of maize are of use in modifying the secretions of the urinary tract. They also possess a distinctly diuretic action. Diuresis is rapidly produced, and the increase of urine is very marked after three or four days. The diuretic effects are observed not only in diseases of the organs concerned in the urinary secretion, but also in the affections of the vascular system (diseases of the heart, blood-vessels, etc.). The pulse is regulated, the arterial tension is increased, while the venous pressure is diminished. The remedy produces no disturbance of the digestive system. The tolerance of the drug is complete and absolute, while in chronic cases its administration may be continued for three to six months without inconvenience.—*Exchange* (*Journal of Materia Medica*, June, 1893).

A Novel Mode of Electrical Treatment.—M. D'Arsonval has proposed to the Académie des Sciences a new plan of treating patients by electricity. The subject is enclosed in a large coil of wire through which alternating currents are passed, and the patient's body thus becomes the seat of alternating induced currents which correspond in frequency with those which circulate in the coil. When rapidly alternating disruptive discharges are passed through the coil, it is possible to demonstrate the presence of the induced currents in the patient by placing an incandescent lamp in circuit between his hands, as it is brought to incandescence, though the patient feels nothing. The influence of the treatment upon the processes of nutrition is considerable, the absorption of oxygen and the elimination of carbonic acid gas being largely increased.—*British Medical Journal*, July 22, 1893.

A New Smallpox Bacillus.—Besser (Centralb. f. Bakt.) recently observed, in an examination of the papule in a case of smallpox at the fifth day, a bacillus measuring ¾ to 1½ mm. in length, with a breadth one-fourth as great. The rod-shaped bacillus was slightly pointed, and thickened in the centre. The bacilli were comparatively long-lived, and capable of enduring considerable variations in temperature. The bacillus is aërobic, stains with ordinary anilin dyes, grows well upon agar and broth, but refuses to grow upon potatoes, serum, or gelatin. This bacillus is different from any which has previously been observed in smallpox, and is regarded by the discoverer as the specific organism of smallpox, though as yet no inoculatory experiments have been made.—*Modern Medicine*, July, 1893.

Nitrate of Strychnine in Alcoholism.—McConnell (New York Medical Journal, June 3, 1893) has used hypodermatic injections of $\frac{1}{20}$ grain of the above drug in twenty-five cases of alcoholism. He concludes: Simultaneously with the use of the remedy the craving for alcohol in inebriates diminishes, and in a few days is completely gone. There is a gradual restoration to physical and mental health, but as most of the cases treated relapsed in from one to eleven months the inhibiting power of the remedy is not permanent. While we have in strychnine a true antagonist to the action of alcohol, and one that will counteract its effects, the inebriate still requires aid which can scarcely be expected of drugs.—*The University Medical Magazine*, August, 1893.

Medical Progress.

LEGAL RESPONSIBILITY FOR REFUSING TO SUMMON MEDICAL ASSISTANCE.—Numerous instances of the death of persons due to the neglect or refusal, either of the patient himself or those in charge of him, to call in medical assistance, are from time to time brought to public attention. Such failure to call in or supply medical aid is due in most cases to the existence of conscientious scruples against such a course, and to a firm faith in the efficacy of prayer, without other or further personal effort, to heal the sick; and the question arises, What is the liability, civil or criminal, of the persons chargeable with such refusal?

The point was judicially determined in England* at the trial of a husband and wife on an indictment for manslaughter in causing the death of their sick child, through their refusal to provide it with skilled medical attention.

The parents were members of a sect who called themselves "Peculiar People." This sect have religious objections against calling in medical assistance or giving medicines in case of sickness; and they justify this course by a literal interpretation of the text in the fifth chapter of the General Epistle of St. James, fourteenth and fifteenth verses: "Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: and the prayer of faith shall save the sick, and the Lord shall raise him up; and if he have committed sins, they shall be forgiven him."

At the trial the following facts were disclosed by the evidence: The child, which was 14 months old, had always been very delicate, and coughed a good deal. When it became worse the elders were called in; they anointed its breast with oil, where the pain was, and offered up prayers. The child became better after that, but on becoming worse it was again anointed, and the parents gave it barley-water, new milk, corn-flour, port wine and gruel, and occasionally a little brandy-and-water. Of this, however, it did not take much, and finally died. The mother devoted most of her time to it during the fortnight preceding its death. The father was at work during the day, but attended to the child in his spare time; he was very kind and affectionate towards it. No doctor was called in. A witness, one of the sect, testified: "Not since we have been living to the Lord have we called in a doctor in case of illness, but before that we did. We are not pressed by the church not to call in a doctor but we are taught to have faith in God. I have been afflicted severely at times with smallpox and other diseases, and have not had medical assistance. I have always called in the elders."

The witness was questioned by the court as follows: "Why don't you call in a doctor?" *A.* "Because we believe so much in the healing power of God, and have confidence that He will raise us up again. We have many living witnesses." "Would it be a sin to call in a doctor?" *A.* "I cannot say that, but still we have confidence in God that He will restore us according to His word." "You think it superfluity, but not sin?" *A.* "Yes." "You believe that God will answer your prayer, and that He is able to heal without the assistance of any mortal?" *A.* "Yes; we have proved it for ourselves many times." "I am not at all suggesting a doubt of your perfect honesty, but I want to know what you really think on the subject. Is the oil used because you think it is any good?" *A.* "We read about it in St. James's Epistle. We don't say anything against calling in a doctor; he is all very well for those who do not put their trust in the Lord."

A post-mortem examination disclosed that the child had suffered from acute inflammation of the lungs on both sides. On one side the inflammation had been going on eight or ten days, and on the other about five days. The child in all other respects had been quite healthy, and in all probability its life would have been saved if medical advice had been obtained early. The defendants thought that the child's death was due to teething. They did not know that the disease was inflammation. The child did not seem to suffer a great deal.

The jury returned a verdict of not guilty; and Parliament at once passed a statute enacting that "When any parent shall wilfully neglect, among other things, to provide medical aid for his child, being in his custody, under the age of fourteen years, whereby the health of such child shall have been or shall be likely to be seriously injured, he shall be liable to summary conviction," etc.

Under this statute a father was convicted of manslaughter, on facts similar to those of the preceding case; and it was held to be no defense to the charge of manslaughter that the parent so neglected, not from any intention to disobey the law, but from a conscientious religious belief that it was wrong and unnecessary to call in medical aid.

The father was one of the sect of "Pecu-

* Regina *vs.* Wagstaffe, 10 Cox C. C. 530 (1868).

liar People." The child was but little more than two years old, and in the custody of its father. It had been ill and wasting away for eight or nine months before its death; and during the whole period of the child's illness the father did not procure any skilled medical treatment for the child, but left it to the charge of women who belonged to the sect, and at intervals called in H——, an engine-driver, one of the elders, who prayed over the child and anointed it with oil. H——, when consulted by the father as to what should be given to the child, thought it was teething, and advised the prisoner to give it port wine, eggs, arrow-root, and other articles of diet which he thought suitable for a child suffering from such a complaint, all of which were supplied accordingly. There was no evidence that the treatment was mischievous, and, though this was probably not logically consistent with the doctrines of his sect as described by him, the court saw no reason to doubt that it was all done in perfect sincerity.

H——, on being asked by counsel for the prosecution whether if one of their sect met with an accident, such as a broken bone, their principles would prevent their calling in a surgeon to set it, answered that they would probably call in a surgeon in such a case, but it had never yet arisen. He was asked whether they trusted to nature in cases of childbirth. He said they did not call in midwives, which would be against their principles, but that several sisters of their persuasion were as skillful as any midwives, and that they assisted the woman in labor.

H—— was further asked whether he had not himself, on the trial of one of their sect, promised that in future medical advice should be called in when necessary. He explained that in that case the disease was infectious, and that he understood the judge to say that the law forbade them to endanger the lives of others; and as it was one of their principles to obey the law, he had given a pledge that they would call in medical advice where the disease was infectious, which pledge they had kept.

The judge here interposed to ask him whether he would now give a similar pledge in cases where the sick person was a helpless infant, taking the law from him to be that, though an adult who could judge for himself might refrain from calling in skilled medical advice without transgressing any law, those who had charge of a helpless infant were bound to procure medical assistance where it was necessary. If he would give such a pledge, the court had no doubt the prosecutors would be perfectly satisfied and give no further evidence. He would not, however, do more than promise that he would bring the point before the next assembly of his church. The prosecution therefore proceeded.

It was admitted on the part of the prosecution that the child was kindly treated, kept clean, and furnished with sufficient food, and nursed kindly by the mother and the women of the sect.

The evidence showed that the prisoner had sufficient means to procure skilled advice; that neither he nor the elder had any competent skill; that the disease of which the child died had nothing whatever to do with teething, but was a chronic inflammation of the lungs and pleura, which, though of long standing, might very probably, though not certainly, have been cured at any time if competent medical advice had been obtained, especially in the early stages of the complaint. A verdict of guilty was accordingly entered.

The Court of Criminal Appeal affirmed the verdict of the lower court.

In a few States there have been occasional prosecutions in cases of this sort, unsuccessful, however, in the absence of a special statute, except where the disease was contagious, as diphtheria, scarlet fever, and the like.

The law permits the utmost latitude for the indulgence of religious belief, yet when that belief reduced to practice seriously endangers the well-being of the people, it becomes a violation of that supreme law which is the welfare of the people, and in the presence of which other laws must yield. Accordingly, in the case of contagious diseases, a vigorous prosecution, by the health authorities, for endangering the public health, under the authority of the maxim, *salus populi suprema lex*, followed by a substantial fine on conviction, has usually had the desired effect in causing those parents, who were otherwise disposed to have their infected children cured by faith alone, to summon skilled medical assistance.

But in the case of non-contagious diseases it would not, as we have seen, in the absence of a special statute so declaring it, be an indictable offence in parents and others having charge of infants to refuse, because of religious scruples, to call in a physician to give them necessary medical attention. No judge sitting in a criminal court would be justified in such case in saying that a parent who exercised his best judgment, though a perverted one, in dealing with his sick child by nursing, instead of calling in a physician, was guilty of criminal neglect.

The common law, therefore, is not, in this class of diseases, a sufficient safeguard against the new and increasing danger to public health occasioned by the existence and numerical increase of sects, calling themselves by a variety of appellations, but who refuse to avail themselves of skilled medical assistance in sickness, professing to rely on other than the usual medical agencies to restore them to health.

The power to remedy this defect of our law is with the legislature; and the exercise of this power, by making it a criminal offense to neglect or refuse to employ agencies of known curative power where infants and other helpless persons are involved, will, as experience with the operation of the British statute has shown, have a salutary effect in correcting the abuses thus arising from the putting into practice, instead of passively indulging, perverted religious opinion.—*International Medical Magazine*, June, 1893.

ANALYSIS OF "CEREBRINE."—The Journal of the American Medical Association, August 26, 1893, contains the following communication with reference to the chemical reactions and physiological effect of certain "organic extracts:"

To the Editor:—I send you this very valuable contribution of Prof. Delafontaine (whom you must know as one of our best analytic chemists) on the chemical composition of Hammond's cerebrine and medulline. This examination was made largely at my suggestion. I found what I supposed was the physiologic action of nitroglycerin by internal administration, and so reported to Mr. Baker, and he suggested that an examination be made of it by Prof. Delafontaine, which has been done, and I hope you will publish the results in your journal.

Yours truly,
D. R. BROWER.

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Some time ago Mr. Baker, of the firm of Gale & Blocki, asked me to make a chemical investigation of a sample of a drug in a small triangular blue glass bottle, labeled "Sterilized Solution of Cerebrine, prepared solely by Columbian Chemical Co., New York," with a *fac simile* of William A. Hammond's signature in red ink across the label.

On experimenting on himself with that drug, Mr. Baker felt the rapid and powerful effect of a more than full dose of nitroglycerin, which made him strongly suspicious of the presence of the latter in that alleged cerebrine. Having put five drops of that fluid on my tongue, I felt the same symptoms described by Mr. Baker, followed by the same occipital headache.

Then I proceeded to the chemical examination as follows: The excipient in that solution is chiefly glycerin. A part of it was treated with mercuric chloride, which gave but a faint flocculent precipitate. No change with potassium iodo mercuriate. Therefore absence of ptomaines or other organic bases. To another part of the liquid were successively added diphenylamine hydrochloride and strong sulphuric acid, which developed the intense deep blue color characteristic of *nitric acid* or *nitrates*.

A few drops mixed with ferrous sulphate and sulphuric acid produced the brownish color also characteristic of nitrates. On the other hand, sulphanilic acid used in conjunction with dilute hydrochloric acid and naphthylamine hydrochloride failed to show the presence of nitrous acid or its salts. Now, one of the properties of nitroglycerin is that it is decomposed by alkalies into a number of compounds, among which are nitric and nitrous acid.

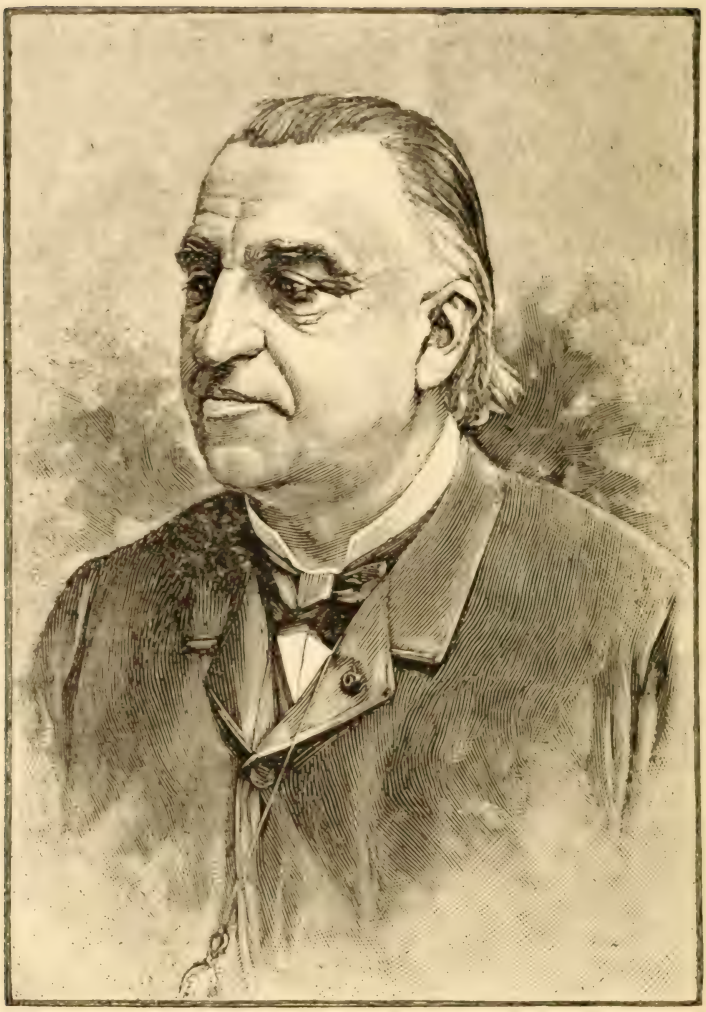
Some of that combine was saponified by caustic soda and the excess of alkali sursaturated. One-half of the fluid gave with diphenylamine the nitrate reaction. The other half showed the beautiful red color due to tritrites when treated with sulphanilic acid and naphthylamine. Thus it is seen that the cerebrine solution is also saponified by caustic soda with the production of nitric and nitrous acid. I have also experimented on an unbroken package of *medulline* prepared by the same concern. Physiologically and chemically the results were the same, so that it is unnecessary to describe them.

On the other hand, a sample of cerebrine made by another firm proved to be physiologically inert and utterly failed to give any of the color reactions described in the foregoing lines.

The chemical reactions of Hammond's cerebrine and medulline fully agree with the physiological effects in that they point out the presence of nitroglycerin, or some very closely allied product which does not preexist in the ox brain. Personally, I do not believe in some putrefactive process generating a nitrate in the Hammond's product. The absence of ptomaines excludes that theory.

M. DELAFONTAINE.

Chicago, August 18, 1893.



DR. J. M. CHARCOT

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Original Articles.

TO BEGINNERS IN LAPAROTOMY.

BY F. BYRON ROBINSON, CHICAGO.*

There are too many laparotomies done to-day by unskilled men without proper facilities. It is criminal to learn laparotomy by beginning on the patient. A few days ago a young man walked into a restaurant and sat down opposite me to lunch. He had graduated about two months previously from a medical college, and he soon made himself acquainted with me. He felt elated over the acquisition of his recent M.D., and to my astonishment he vigorously announced himself on a "hunt" for a laparotomy. He said he was determined to find a laparotomy soon, and that he should do it himself. He told me (significantly) that his professors had said that laparotomy was one of the easiest of surgical operations. Now, as this young physician was in such dead earnest in his "still hunt" for a laparotomy, I thought I would try the effect of reasoning with him. Fortunately Dr. Gillette, of Toledo, another gynæcologist, sat by me, who could add to my words that laparotomy is a very serious operation and should be done only by one trained in the work. I said to the bright young doctor: "Have you ever done five post-mortems?" "No," he replied. I said: "Have you ever done *one* post-mortem?" He said he had never done *one post-mortem.* He absolutely acknowledged that he had only superficially dissected *one abdomen.* I then asked him how he expected to do the "coming laparotomy." He replied that he would read up for a few weeks. After a half-hour of talk the young doctor said to me: "Why! no doctor ever told me that a laparotomy was so serious a matter as you say. I am glad I had this talk, and I will study before I operate." But the young doctor could not help thrusting at me the idea that I had to begin once, and that I was doing laparotomy, which he said he had just as much right to perform as I had. I replied: "Doctor, you have just as much right to laparotomize as anyone. But simple justice to a patient demands that you should be properly prepared to accomplish what you undertake."

This young physician is simply a type of what I will denominate the "new school of specialists." I mean by this new school of specialists men who graduate from a medical college and enter immediately into the practice of abdominal surgery and gynæcology or some other specialty. The specialist may have no training and attempt to learn what to do from observing the patients and from reading.

More ambitious young men place themselves under masters for a longer or shorter time.

The older plan of becoming a specialist was to be a general practitioner or a general surgeon for five to ten or more years, and then *gradually* to limit practice to some single line of work.

McDowell was a well-tried surgeon before he deliberately did laparotomy in 1809. Atlee did hundreds of operations before he carefully diagnosed and successfully operated for ovarian tumor. All the famous laparotomists of England for the past twenty-five years have been well grounded in general surgery. The same is true in Germany and Austria.

A citizen is liable to arrest for manslaughter. But for woman-slaughter, which occurs by the hundreds annually in this country, the law is lenient. Allow me to report a few of my observations of beginners attempting to do laparotomy without reasonable training:

Dr. G—— was a general practitioner for some ten years. He had no training in surgery, and so little did he know about abdom-

* Professor of Gynæcology, Chicago Post-Graduate School; Gynæcologist to Woman's Hospital, to Post-Graduate Hospital, to Chicago Charity Hospital, and to Columbia Dispensary.

inal surgery that he asked my friend how he would do a laparotomy. Finally he said he would like to know how anyone expected to drain the abdomen with the tube standing straight up. Dr. G—— performed *four* laparotomies on *four* young women. The sad sequel was that *three* of the women died. Mortality was 75 per cent. He had never learned to do abdominal surgery. It is reported, now, that he became discouraged or afraid and does other work than laparotomy.

Dr. B—— has been a general practitioner for eight years. He never was trained in surgery beyond the range of ordinary collegiate clinics. He has studied the nervous system, and knows something of it in a special way. Dr. B—— has performed two laparotomies lately; one was on a beautiful young woman. Both women died. These were the only two laparotomies he ever did. Mortality in this case, 100 per cent.

Is this not woman-slaughter in the first degree.

My friend Dr. L—— was a general practitioner. He did a little surgery, but only common cases such as amputation of a leg or an arm. Dr. L—— studied gynæcology out of the books to some extent, but had no training in abdominal surgery. Like Drs. G—— and B——, he knew relatively nothing of the anatomy of the abdomen and pelvis. Like them, he would not know how to mend a gut if he had torn it apart. Dr. L—— performed *four* laparotomies, and two of the women died. His mortality was 50 per cent.

I am acquainted with two more good general practitioners who have had no training in abdominal surgery, but who did two laparotomies. Both women died. Mortality 100 per cent. Another general practitioner did three laparotomies, and one died. Mortality 33⅓ per cent.

My friend Dr. H—— told me a few days ago that he tried laparotomy in four cases, and two died. Mortality, 50 per cent. But the Doctor said he quit because the patients died too easily. Dr. H—— is a general practitioner.

My friend Dr. A—— is a general practitioner and does some surgery. He performed laparotomy for bowel obstruction. On opening the abdomen he said the ascending colon was "black looking" from a band having stretched over it and obstructed it. He said he simply cut the band, but did not know what to do with the colon as he thought it was gangrenous. He did not know enough surgery to attempt to make an artificial anus. The patient died promptly. His mortality in abdominal surgery was 100 per cent.

I could multiply this list of tragic laparotomies where beginners have started to do this delicate work without reasonable training or without any training in abdominal surgery. The cases of tragic deaths, now, in laparotomies, generally occur in small towns with insufficient hospital facilities, with hardly any trained nurses, and with beginners in abdominal surgery who have had but little or no training in laparotomy.

Mortality of 30 per cent., 50 per cent., or 100 per cent. in laparotomy must be viewed to-day as woman-slaughter. Laparotomy of to-day rests upon the accumulated experience of fifty years, and it is almost a science. Fifty per cent. of deaths to-day in laparotomy is criminal. Let me assert the terrible fact that beginners and amateurs in laparotomy will average a death rate of about 25 per cent., while skilled abdominal surgeons will average about 5 per cent. In my last forty laparotomies, which represented as severe pathological conditions as man ever saw, I really only lost one from the operation. These were bad cases and had filtered through other hands. I will say that a second in this list of forty cases died from a pure accident; five days after the operation she was doing well, when suddenly she died from an embolus which floated into the lung.

Dozens of skilled abdominal surgeons can now present one hundred cases with five deaths. Tait did one hundred with one death. Stansburg Sutton told me last week that he did one hundred with two deaths. Now I want to ask the beginner: What makes the difference between Mr. Tait's result and that of the man who is just starting without the reasonable training, without the trained nurse or the hospital facilities? The reader can answer. You will all remember that in Shakespeare's masterpiece Hamlet handed a flute to Guildenstern and told him to play. Guildenstern says: "I can't play." Hamlet insisted that he should play, that all he had to do was to blow with his mouth and

lift his fingers up and down on the flute-holes. But Guildenstern pointedly replied that he could not play because he had not the *skill*. Now the difference between high and low mortality in laparotomy is simply a question of acquired skill. Skill means superior practical and theoretical knowledge on any subject.

But the young doctor says: "I must have patients to begin on. I must have patients on which to learn laparotomy." No, Doctor, you are wrong; you are unjust; you are not doing to another as you would be done by. You are wronging yourself and the patient; and the profession gets a black eye every time you lose a patient. Doctor, please allow me to give you some advice as to beginning to perform laparotomies. It may be you will listen to me more carfully if I tell you that I have studied abdominal surgery and gynæcology for eight years, that I went to Europe three times and studied a year each time, that I spent six months as a pupil of Mr. Tait. I have dissected carefully about 50 cadavers and experimented on the abdominal viscera of over 200 dogs. I have seen hundreds of operations, and done many myself. In the first place, if you ever do laparotomy skillfully, you will have to learn it. Remember, laparotomy is no more a pioneer field, but well tested and tried. It is now a science.

Allow me to illustrate how to learn the subject, by my assistants. I have three assistants in the work. One of them went to Europe and remained a couple of years. She had a good hospital training. She assisted me many times. Now during the past eight months she has performed eight successful laparotomies herself, without a death. She takes her patients to a hospital, and then requests me to assist her and stand by if any severe difficulty arises, but I have only had to really help her in one very bad case.

Is this all she does, simply assist? No. She has carefully dissected and studied for weeks the abdomen and pelvis of many cadavers. She has put in a whole year in study and dissecting the abdominal viscera in order to learn what to do when the abdomen was opened.

One of my other assistants has helped me in some twenty-five laparotomies, and I let her do many things during the operation. She is also steadily pursuing the study of the abdominal viscera. When she begins on her first laparotomy, she will have enough skill to know what to do.

My other assistant is demonstrator of anatomy in a college. She had four years in a good hospital where abdominal surgery was a specialty. She brings a case to a hospital and requests me to assist her, and so far she has not lost a case. She knows exactly the pelvic and abdominal structure, and when pathology rings in its changes she is not lost.

These three women will in a few years be skillful laparotomists, simply because they are properly learning how to do it.

But the young doctor says: "I have no time to go away to learn. I have paid for a college education already." This remark is not just. A patient's life cannot be bought and sold like bread and butter. Young physician, you can never be a skillful laparotomist unless you go under a master, unless you experiment on animals' abdomens. You must dissect the abdomen of the cadaver, and you must study the book on abdominal surgery. Laparotomy cannot be learned in a twelvemonth. It will require systematic experiment, systematic observation and reasoning. (Remember, I am not talking of an emergency care of strangulated hernia where immediate operation is demanded, but of laparotomy, where there is ample time for deliberation.)

I would like to say to the beginner that half the battle in laparotomy is with the intestines. Now, the young doctor can learn much that is good in any small town by experimenting on the intestines of dogs. He can learn how to mend wounded bowels, and how repair acts on bowels. He can learn what peritonitis really is, by the post-mortem on the dog. He can learn very much by practicing on the dog's abdominal viscera. He can very soon learn how easily a dog can be killed by opening his abdomen. And a woman will die just as easily. I would like to say to him that one of my most valuable experiences in abdominal surgery was gained on the abdominal viscera of 230 dogs during five years' experments. It is fascinating work.

The young doctor must remember that if he loses his first laparotomies it will require years to recover from its damages. In the United States scores of women die every year from laparotomies performed unskillfully by beginners. Within my own personal knowledge, if recollection serves me right, in the last five years over thirty women have needlessly lost their lives by beginners in laparotomy. Nearly all these fatalities have happened in small towns with poor facilities. But the main thing was the *little* knowledge possessed by the surgeon. If we go back to doing laparotomies in private houses, the old mortality will return, and this is unfortunately just what the beginner in a small town must do. Besides, nurses are scarce in many smaller places.

A few suggestions may not be without benefit to a beginner who wants to be a laparotomist:

1. Remember it is criminal to learn to do laparotomy on a patient.

2. Do not attempt to begin laparotomies in private houses and with no nurses.

3. Before doing any laparotomy be sure to study under a master, and assist him if possible, so you can see the pathology in the abdomen and how he removes it. Ask him to allow you to tie a knot once in a while. Never lose the chance of assisting in or witnessing a laparotomy.

4. Learn the after-treatment. Half the battle is with the intestines.

5. Study carefully the abdominal and pelvic viscera of the cadaver. Study as many cadavers as you can. Never lose the chance of doing a post-mortem or attending one. Study the dog's viscera.

6. Be sure to do systematic experiments on dogs' abdominal viscera. Always do the autopsy on your dogs yourself. Note what damage on the peritoneum your manipulations did. Observe what peritonitis really is.

7. Be clean without chemicals. Learn to use very few instruments. Beginners should always invite a laparotomist friend to be present.

8. Be careful of promises.

PARALYSIS IN OPIUM-SMOKERS.*

BY DR. MICHAUT.†

Whatever the mode of its absorption, opium may produce—like alcohol, which resembles it in so many respects—nervous accidents which vary greatly in their clinical manifestations. These manifestations, carefully studied with respect to morphine, are less familiar in connection with the symptoms of morphinism produced by the absorption of opium *en masse*, as consumed by the smoker.

Throughout Indo-China the habit of smoking opium prevails very widely, not only amongst the natives—the Tinquinese, Annamese, etc.—but also amongst Europeans, who readily contract this habit and force it into abuses which are rarely attained by the natives. The Annamese, like the Chinese, use opium, but without exceeding their dose—that is to say, without daily augmenting the number of pipes. The European, on the contrary, is more exposed to the accidents of intoxication, because he allows himself to drift into the intemperate smoking of opium, exceeding the number of pipes necessary for reaching opium intoxication. Between the Annamese smoker of opium and the European possessed by the same habit, there is the same difference that prevails between the alcoholic and the dypsomaniac—between the morphine-eater and the morphinomaniac. That is to say, less habituated to the poison, Europeans exhibit a greater sensibility to the intoxication. In this respect *toxic heredity* plays a great rôle; in the Annamese and the Chinese there is produced an *attenuation of the toxic potency through successive impregnations* of the individuals of the same family. This explains the rarity of fatal intoxications amongst the natives when comparing the mortality of these Oriental opiate-consumers with that of European opium-smokers.

Moreover, the habit of smoking opium is far from being uniformly prevalent throughout Indo-China. The Tonquinese smoke far less than the Cochin-Chinese, and opiomania is peculiarly the characteristic of the higher classes and rich families; this is readily understood in view of the relatively high price

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†Of Hai-Phong; ex-Interne of Hospitals.

of opium, especially since the establishment of the *farms* and of the monopoly accorded by the Protectorate to the European farmers.

Opium is supplied to the natives and to the Europeans by two farms, one established at Saïgon, the other at Hanoï, to which it will soon be necessary to join the farm of Annam. Before the establishment of these farms, the commerce in opium was free and the price very moderate, thus permitting the natives and even the poor to indulge in their pet vice. At present, contraband opium is distributed everywhere by the Chinese traders, organized into societies. These bands do not hesitate to defend their merchandise by force of arms; this is even one of the numerous causes of the Chinese infiltration into Tonquin and of the piracy, so to speak, endemic to the country.

Opium absorbed through the respiratory passages is pre-eminently an amyosthenic. It produces a form of muscular debility which is manifested in the smoker, as in the alcoholic subject, by titubation. The muscular prostration is a very common thing amongst the smokers, as is also the action on the muscular coats of the intestine, and respiratory passages, inducing chronic diarrhœa or dyspnœa, according as this action is brought to bear more particularly upon the one region or the other. Opium diarrhœa, due to paralysis of the muscular layers of the intestine, is one of the most terrible accidents in a country where dysentery prevails endemically and in which cholera is not rare; and in each epidemic, the European smokers of opium are the first to be stricken. The paralysis of the muscular tunic of the stomach, joined to the gastritis so prevalent in warm countries (due to the immoderate use of ice), explains the incoercible vomiting of the smokers. Finally the paralyzing action of opium on the muscular apparatus of vision, renders intelligible the diminution in the power of accommodation, the diplopia, and the suffusion of the eyes with tears (epiphora), so constant in veteran smokers.

More rarely the action of opium is exerted upon the bladder, although incontinence of urine is not rare. Frequently, also, seminal losses are observed.

As will now be seen, the nervous accidents produced by opiomania approach very closely to those caused by morphinomania. It is, however, interesting, to note the features in which the two intoxications differ, and particularly the peculiar symptoms proceeding from opiomania. Such a study cannot be made, save in a country, where the consumption of opium is general.

For a long time observers have studied the nervous accidents which are developed in alcoholic subjects as the result of an acute malady—pneumonia, for example. The delirium of the morphinomaniacs in the same malady is very familiar. Opium-smokers do not escape from the rule, and exhibit the same processes in the course of their internal maladies. The wounds of war are far more grave in the officers who have contracted the habit of smoking opium. If, on the occasion of a slight traumatism, an opiomaniac remains in the hospital and is obliged to desist from smoking, he is attacked by an acute delirium absolutely comparable with delirium trémens. Physicians of the Orient can cite numerous examples of soldiers or officers who have committed suicide in one of these accesses of delirium, produced by the momentary suspension of opium. The moral enervation of soldiers in a country where the climate is itself productive of anæmia, ought to impart the proper anxiety to the administrators entrusted with the hygiene of troops in these regions. Opium ought to be stringently prohibited. It is already the cause of sufficient ravages amongst administrators to justify an endeavor to arrest the progress of the contagion of morphinism prevailing amongst the smokers in the army. The isolated military posts where a handful of men are separated from all the centers of civilization, constitute the best soil for the culture of military opiomania. The poison successfully assails the officer, and the soldiers, influenced by the example of their chief, yield themselves up to the terrible indulgence which in Indo-China constitutes a good representative of the hypodermatic habit of our European cities.

Among the most curious accidents produced by opiomania, the least familiar is the *paralysis of the extensors* of the hands and fingers. The paralysis of the extensors

caused by the narcotic intoxication of opium smokers is almost completely identical with the clinical tableau of *saturnine paralysis* so learnedly described by Duchenne (of Boulogne). The symptoms of these two toxic paralyses so resemble one another, that diagnosis would be impossible to any physician not properly informed beforehand.

Paralysis of the digital extensors does not supervene save in the old opium-smokers who are already in the clutches of a marked intoxication. It generally ensues in the "heavy" smokers who exceed their fifty pipes a day, or who have been smoking for many years (five, six, eight years). It seems to be favorably influenced in its development by alcoholic excesses; but if the ethyl poison and the opium poison unite in the production of the paralysis, the alcohol exhibits solely the action of an adjuvant. The type of opium paralysis is too specific to permit of confusing it with a paralysis of alcoholic origin.

The *début* is insidious and slow. The intoxicated patient first experiences embarrassment in certain movements; he can no longer grasp small objects; his pencil, his pen-holder fall from his fingers. The movements of the wrist, and the motions of extension become difficult. Even at this stage, the attitude of the smoker becomes characteristic. I have been able to diagnose opium intoxication in a large number of colonists by simply observing the habitual position of the hands and the fore-arm. The patient presents himself with the fore-arms flexed at an acute angle to the arms. The wrists are distinctly bent, the hands pendant, inert as though dead. The fingers seem to cling together, and the entire emaciated hand assumes the aspect of a spindle or bobbin. If the patient wishes to take hold of an object, he is obliged to move his arm sideways, gliding it over the table, and then seizing it by suddenly closing the hand over it. If the arm be fixed, the patient cannot extend the wrist; extension of the fingers is equally impossible.

Thus it will be seen that we have absolutely the clinical tableau of saturnine paralysis.

In one patient the paralysis was so typical that if it were not for the absence of all traces of lead in the urine, and the impossibility of finding any source of lead intoxication, whilst the patient was an avowed smoker, confusion might have occurred.

As a means of differential diagnosis, it must be remembered that in the paralysis of the extensors due to opium, there is no muscular atrophy and the sensibility remains intact. Finally, the absence of the pipe and the professions of the patient aid in establishing the diagnosis. As for *dorsal tumor of the wrist* it also existed in the case of one patient.

It must be added that the foregoing presents a tableau of the paralysis at its maximum. The patient is then in a condition of emaciation and anæmia, which is to be conceived only by recalling the tubercular cachexia of the last stage of pulmonary phthisis. Prior to this period, paresis is alone observable—a paresis, however, which is sufficiently pronounced to give to the opium smoker the characteristic attitude that we have described above.

In *résumé*, we see that opium absorbed through the respiratory passages produces in those who smoke it paralytic accidents similar to those supervening upon the use of other toxic substances—among others, alcohol and lead. The special form of the paralysis, as affecting the extensors of the hands and fingers, possesses one feature of particular interest in that it is absolutely identical, from a clinical point of view, with santurnine paralysis. Is not this a curious evidence of the affinity prevailing between the different groups of toxic paralyses?

The treatment of these accidents merits a special study. We may say, however, that while injections of spartein and caffein are indicated, there remains only one true resource, without which all other therapeutic measures prove illusory, and that we have stated to be *permanent removal from the countries in which opium is smoked.* It is absolutely *impossible* for the physician to effect the weaning of his patients from the opium habit in a colony where the opiomania makes a hundred times as much progress as the morphine habit in Europe.—*Bulletin Général de Thérapeutique.*

THE ART OF FORMULATING.

No. 4.

BY DR. DUJARDIN-BEAUMETZ.

Introduction of Medicines by the Stomach.

I shall treat of my subject under two heads: The Gastric Method and the Intestinal Method, beginning with the first.

We introduce by the stomach liquids and solids. We will first take up liquid substances and will study their mode of administration.

Posology of Liquid Substances.

Usage requires that we should administer liquid substances by spoonfuls, and despite the lack of precision of such a method, resulting from the fact that spoons are not always of the same size holding the same quantity, the custom is so established that it will long remain of giving liquid medicines in tablespoonful, dessertspoonful, or teaspoonful doses. A dessertspoon should always hold two, a tablespoon four, teaspoonfuls. A teaspoonful is supposed to be about a fluidrachm. The contents of these spoons vary according to the liquid employed and according to its density.

This applies both to drops and grammes. The following table, borrowed from Yvon, shows the difference which exists between the contents of these spoons according to the liquid employed:

		Tablespoon.	Dessertspoon.	Teaspoon.
Water.....	D=1.000	16.00	12.00	4.0
Alcohol.....	D=0.914	12.00	9.00	3.0
Acacia mixture.	D=1.125	18.00	13.50	4.5
Syrup	D=1.321	21.00	16.00	5.0
Oil of almonds.	D=0.917	12.00	9.00	3.8

What you should remember, is that a tablespoon holds between 12 and 21 grammes (the gramme being 15 grains), and that, on an average, it contains 16 grammes or 4 teaspoonfuls when the liquid is water; the dessertspoon holds about one-half this quantity, and the teaspoon one-fourth. There is a difference between the English and French spoons, which you should always take into account.

Of late, a curious kind of spoon has been devised for administering oily substances having a peculiar taste, like cod-liver oil. These spoons are very long, drawn to a point, and covered by a lid, so that they can be carried back into the throat and thus introduce the dose beyond the papillæ of the tongue.

Glasses and Phials.

When the medicinal substances are to be administered in large quantity, glass tumblers, wine glasses, etc., are employed. Here we find the same difficulties we had before encountered, for glass tumblers and similar drinking utensils are of various sizes. Ordinarily a glass tumbler will hold about 200 grammes, or a little less than a half pint. There is the same difficulty with regard to phials and bottles. A very convenient phial is that which holds 125 grammes or about four English fluidounces. Take a phial for instance, holding the above mentioned quantity of 125 grammes.

According to Yvon, the amount of various liquids which it may contain will vary according to the following table:

1.—AQUEOUS SOLUTIONS.

Seven and a half tablespoonfuls.
Ten and a half dessertspoonfuls.
Thirty-one teaspoonfuls.

2.—ACACIA JULEP (about the consistence of mistura acaciæ).

Seven tablespoonfuls.
Nine dessertspoonfuls.
Twenty-eight teaspoonfuls.

3.—SIMPLE SYRUP.

Six tablespoonfuls.
Eight dessertspoonfuls.
Twenty-five teaspoonfuls.

4.—TINCTURES.

Ten and a half tablespoonfuls.
Nineteen dessertspoonfuls.
Forty-two teaspoonfuls.

Crequy has proposed, with good reasons, to substitute in private practice graduated glasses and phials which would enable us to give more precision to the administration of liquid substances.

[In American practice, we are more and more using graduated glass tumblers which will hold about two ounces. These have a stamped mark at the level of the half drachm, drachm, two drachms, three drachms, half ounce, etc. Such graduated measures can be bought of the apothecaries for about five cents apiece. There is a great lack of uniformity in the size of our spoons. A tea-

spoon should hold a fluidrachm, or about 100 drops of ordinary tinctures. A dessert-spoon should hold two, a tablespoon four teaspoonfuls. The tablespoonful is supposed to represent half a fluidounce. We have to make a great allowance for oscillations from this average, and this is why the graduated glasses are preferable. With such exact means of measuring, we do not need to be particular about the size of our bottles.—TRANSLATOR.]

DROPPING TUBES. Lebaigne's capillary dropping tubes, first brought into use about 1867, and modified by Limousin, enable us to obtain mathematical precision in dropping liquid medicines. These dropping tubes, which have a diameter of three millimeters, give drops of water weighing each 5 centigrammes, on about 1 grain; 1 cubic centimeter of water will give exactly 20 drops of liquid. The number of drops contained in a given quantity of liquid will vary according to the density; thus, if a cubic centimeter of water will give 20 drops, the same quantity of ether will represent 90 drops.

NUMBER OF DROPS PER C.C. OF THE FOLLOWING LIQUIDS:

	Drops.
Water	20
Alcohol (90°)	61
Alcohol (60°)	62
Tincture of aconite	53
English "black drops"	37
French laudanum	35
English laudanum	33
Tinctures of most kinds	53
Chloroform	56
Ether	90
Croton oil	48

From the above, it will be seen that Sydenham's (English) laudanum gives 33 drops per cubic centimeter, and that the tinctures give 53 drops. Our alcoholature of aconite gives also 53 drops per c.c. Hence, when you give 10 drops of these preparations, you are far from giving one-half a cubic centimeter, in fact, the quantity is only one-fifth.

Capsules, Pearls, etc. The gelatin capsules or "pearls" so much in use to-day render very easy the administration of certain medicinal substances of persistently disagreeable taste.

Since 1838, when Nothes was one of the first to counsel gelatin capsules, this mode of administration has been much affected For the *hanâraché* (gold lactic skin), first employed, was substituted gelatin, then gluten and for the old process, which consisted in moulding the gelatinous mixture on a metallic rod, much more expeditious methods have been devised, giving us at a low price for essences, ethers, oils, etc., such delicate capsules as Clertan's pearls.

The latter represent the smaller sized capsules. We have others of much larger size, quite soft, and capable of containing a considerable dose, such as those made by Parke, Davis & Co., for the administration of castor oil and cod-liver oil.

Solutions..

Active substances are much given in solution, and the vehicle may be water (*hydrolates*—decoction, lotion, infusion, fermentation, etc.); alcohol (alcoholates, tinctures); ether, wine, vinegar, etc. Then come the medicinal syrups, the oils, fluid extracts, etc. We will begin with simple solutions. In all the treatises of pharmacy you will find tables of the solubility of medicinal substances in water, alcohol, and ether, and under varying temperatures.

Before studying the "hydrolates," *i. e.*, watery solutions, I must define these words *solution* and *dissolution*. When a substance is in solution, it does not undergo any chemical alteration, and on evaporating the water you get it back unchanged. *Dissolution*, on the contrary, supposes a chemical action which modifies more or less profoundly the atomical constitution of the body dissolved.

[We do not use the word *dissolution* in this sense, and in our nomenclature, solution is sometimes accompanied by chemical reaction, as when metals are dissolved in acid liquids.—TRANSLATOR.]

HYDROLATES.*—We have first of all the ptisans or watery solutions, of which a good example is hydromel, or the solution of honey in water. The officinal formula is one part of honey to 10 parts of warm water. Our fathers made much use of cassia, which was administered in the form of a ptisan by solution. One part of extract of cassia was dissolved in 100 parts of warm water.

Another form of ptisan is the *maceration.*

*This word is French. Tr

The active substance is placed in cold water and allowed to macerate for four hours; calumba, gentian, quassia, rhubarb, thus yield useful ptisans. We generally employ about 5 grammes (or 75 grains) to the liter (quart) of water. The most popular are the macerations of quassia, chamomile, calumba. A good stomach-bitter is made by macerating a few quassia chips in a tumblerful of cold water half an hour before eating; you are, of course, all familiar with the cups of quassia wood, which, by being filled with cold water, in a few minutes give a maceration quite impregnated with the bitterness of the quassia.

Ptisans by Infusion.—Infusions are made by steeping the active principles (leaves, stems, roots) in hot water a quarter of an hour or so. Most of the infusions of the U. S. P. contain one-half to one ounce of the material to a pint of water. The water should be simply hot, and the quantity of liquid is little reduced by steeping. By boiling, we have the *ptisan by decoction.* As the type of decoctions, I may mention that of Iceland moss. In order to deprive this lichen of its bitter principle, it is necessary first to wash it in boiling water, then to steep it in boiling water. The decoction of pomegranate root is made in the same way. One ounce of the root is steeped in a pint of water and boiled down to half a pint. In making the decoction of sarsaparilla, the root is first macerated in cold water for several hours, then steeped; this is called the *ptisan by digestion.* In making the infusion of couch grass, we first bruise the roots. This is necessary in all cases where the root is surrounded by a silicious envelope.

As a means of sweetening ptisans we may use either sugar or liquorice. Ten grammes (or about 3 ijss) of liquorice root will suffice for a quart of infusion; 1 or 2 ounces of sugar may be used instead. The glycerrhizate of ammonia is now much used instead of liquorice, being far less alterable; it is found in commerce under the form of bright black spangles.

Compound Ptisans.—These are also called *apozems,* and contain more than one ingredient. Among these compound ptisans we may enumerate the *Infusum gentianæ Co.*, the *Decoctum aloes Co.*, the *Infusum lini Co.*, the *Infusum rosæ Co.*, the *Decoctum sarzæ Co.*, etc. The *fleurs pectorales* (pectoral flowers) of the French Codex consist of an infusion of the following herbs: Mullein, corn poppy, mallows, catsfoot, coltsfoot, sweet violet. The "sudorific ptisan" contains the following ingredients: Guaiacum wood, sarsaparilla, sassafras, liquorice root. The formula may be written thus:

Guaiacum wood, ℥ ij.
Sarsaparilla root, ℥ j.
Sassafras root, ʒ ijss.
Liquorice root, ʒ v.

M. Steep in a quart of water. Dose, three or four fluidounces.

The following "purgative ptisan" is called the ptisan of Hardy, or of the Hospital of St. Louis:

Senna leaves, } ää 8 grammes.
Infusion of wild pansies, }

Infuse for one hour in a quart (liter) of boiling water, and sweeten with honey.

The "black draught" of the English Pharmacopœia consists of senna, ginger, and epsom salts.

It is well in preparing macerations or infusions of senna to first subject the senna to a preparation which in part takes away its griping properties, namely, by macerating it in alcohol.

There are certain medicinal solutions to which attention may momentarily be called, and which are much in vogue; among these I may specify Van Swieten's solution of corrosive sublimate (15 parts to 1,000) and Fowler's solution of arsenic. Tar water, made by adding 1 part of tar to 30 of water, is also a famous preparation. The distilled waters called "hydrolates" constitute vehicles for our potions. These consist of orange flower water, rose water, the aqua laurocerasi, whose medicinal properties are due to hydrocyanic acid, etc. The Codex requires that the quantity of hydrocyanic acid should always be reduced per liter to 50 centigrammes by adding water, to avoid all danger. This cherry laurel water is given in dessertspoonful doses to adults, and is a good palliative in coughs and a stomach sedative.

In my next lecture I shall take up alcoholates and tinctures.

URINALYSIS.

(*Continued.*)

BY G. FRANK LYDSTON, M.D., CHICAGO.*

Organized Deposits—Character of the Urine in Special Conditions.

Albumin in the urine as connected with the ordinary forms of Bright's disease is quite a constant symptom in certain surgical diseases of the genito-urinary tract. For practical purposes the albumin may be divided into serum-albumin and pus-albumin. It is important to differentiate the two, for, as might be imagined, there is a wide variation in the prognosis of the case according to the origin of the albumin. On the one hand the albumin is due to renal disease of a serious and probably incurable character, while upon the other its presence depends upon the admixture of the urine with certain inflammatory products of local disease. It is impossible to differentiate the two forms of albumin by simple chemical examination. When there is no renal disease the case may be diagnosticated negatively by the constant absence of casts of the urinary tubuli, and upon the symptoms and clinical history of the case. If, on the other hand, acute or chronic disease of the genito-urinary tract coexists with morbus Brightii, it is a difficult matter to determine the precise amount of albumin dependent upon each cause. In such cases we must be guided to a certain extent by the determination of the amount of excreted urea as a criterion of the functional activity of the kidneys, and the specific gravity of the urine after all albumin has been removed. In the majority of instances in which pus is present, a fair estimate of the condition of the kidneys may be formed by decanting the supernatant fluid from the purulent deposit and after filtration subjecting it to chemical examination. When the pus is dependent upon inflammation of the bladder or urethra, these parts may be thoroughly freed from pus by irrigation, after which a small quantity of urine is allowed to accumulate, and is then withdrawn and examined. The difference, or otherwise, in the amount of albumin in the first and last specimens, is a fair criterion of the condition of the kidneys.

Albumin may be found in the urine in surgical kidney with or without coexistent pyelitis; in cystitis, vesical cysts, enlarged prostate, gonorrhœa, gleet, and hæmorrhage from any portion of the genito-urinary tract.

Albumin is likely to be found in that peculiar form of renal disease secondary to prolonged and wasting suppurative processes in various portions of the body, particularly those involving the bones, of which caries of the spine and of the hip-joint are fair examples. This form of renal disease is associated with a similar lardaceous deposit in the liver and perhaps other viscera, and is known as the *amyloid* or *waxy kidney*. It is to be considered as a surgical affection of the kidney, not because of any amenability to surgical methods of relief, but on account of its occurrence as a secondary feature of surgical diseases elsewhere than in the genito-urinary tract. Whenever albumin is present in the urine and no tube casts can be found, after repeated examinations with the microscope, it is reasonable to suppose that the secreting structure of the kidney is nearly or quite free from disease.

Blood is present in the urine in a number of distinct and separate affections of the genito-urinary tract. The various conditions which give rise to its presence will be discussed in detail in a subsequent lecture upon hæmaturia. In a general way its origin may be due:

1. To local disease or injury of any portion of the genito-urinary mucous membrane—for example, traumatism, laceration by a passing calculus or by the movements of a large vesical calculus, acute Bright's disease, parasitic disease, cancer, sarcoma, and tuberculosis.

2. It may occur as a consequence of peculiar conditions of depravity or disorganization of the blood—such, for example, as is met with in scorbutus, purpura hæmorrhagica, pernicious malarial infection, and typhus fever.

3. From pernicious perturbation of the capillary circulation of the renal tissue, such as is sometimes met with in simple intermittent fever, or as a result of certain peculiar

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impressions made through the emotions upon the vaso-motor filaments of the sympathetic.

4. And most rarely it may be a result of simple passive hyperæmia incidental to obstructive cardiac lesions.

There is necessarily no constancy in the amount of blood present in the urine in hæmaturia. The color of the urine varies from a slight foggy or smoky appearance to a color closely approximating pure blood. In some cases the blood is fluid, and in others coagula of greater or less size are present, this feature varying with the activity and origin of the hæmorrhage. The amount of blood necessary to give a decided color to the urine varies somewhat. Much depends upon the freshness or otherwise of the blood and upon the depth of the color of the urine prior to its admixture with the blood. In some cases a very slight hæmorrhage in the genito-urinary tract will impart an intensely red color to the urine.

Ralfe* has made some practical experiments respecting this point, which he reports as follows: "In some of the experiments I made in 1873 at the laboratory of Charing Cross Hospital, and published in the Lancet, I found that only 1 part of blood gave a decided smoky tint to 1500 parts of normal urine, whilst 1 part in 500 gave a bright, cherry color. Considerable hæmorrhages, therefore, are best judged by the amount of coagula rather than by mere intensity of color."

In some instances blood is present in the urine in its normal or formed condition, blood corpuscles being recognizable microscopically (*hæmaturia*). In other and much less frequent instances the corpuscles are disorganized, and nothing but the coloring matter of the blood is present (*hæmaglobinuria*, *hæmatinuria*). In a general way, the former condition is indicative of direct vesical lesion of some portion of the genito-urinary tract, the blood in general being of normal composition and consistency; while in the latter there may not be any solution of continuity in the genito-urinary mucous membrane, but there is a condition of aplasticity and disorganization of the blood, which permits the fluid to transude freely through the walls of the capillary blood-vessels and its consequent appearance in the urine. If the blood-corpuscles escape in such instances, they are of such low vitality that they are easily broken down and disappear quickly.

The diagnostic significance of blood in the urine is succinctly stated by Ralfe* as follows:

"1. Hæmaturia—the character of the hæmorrhage, together with the general and special symptoms, is usually sufficient to indicate the part of the genito-urinary tract from whence it is derived. Thus (*a*) acute nephritis—smoky to dark-brown urine persistent for some days, with granular and bloody casts and excess of albumin. (*b*) Renal calculus—often deep-red from excess of blood, increased by movement, and passing off rapidly if the patient is kept quiet in bed, so that only a few blood corpuscles can be seen in the urine. Generally accompanied by or immediately following a severe attack of colic; retraction of testicle on side affected. (*c*) Vesical calculus—hæmorrhage generally follows undue movement, especially jolting; bladder symptoms prominent; detection of stone in bladder by sound. (*d*) Cancer of kidney—hæmaturia very abundant with large coagula, and repeated at irregular intervals; generally tumor in loin. (*e*) Cancer of bladder—frequent and profuse hæmorrhage; cancer cells in urine; pain referable to bladder, and a tumor may be discovered with sound. (*f*) Morbid conditions of the blood—hæmorrhage often profuse, but rarely attended with formation of clots; general constitutional symptoms manifest. (*g*) Intermittent hæmaturia—the blood passes at irregular intervals, is generally associated with a considerable quantity of albumin and a definite rise of temperature. In this case there is a history of ague if that disease has disappeared. It is sometimes associated with intermittent chyluria or gout.

"2. Hæmatinuria (*hæmaglobinuria*).—In this case only the coloring matter of the blood is present; no blood corpuscles, or only a few, are to be found. The attacks come on in paroxysms, attended with a chill and generally pain, with some degree of nausea and slight jaundice. The urine has a port-wine color, and is usually passed clear; on

* *Op. cit.*, p. 160.

* *Op. cit.*, p. 160.

standing it deposits a granular sediment consisting of a few tube casts (fibrinous cylinders), epithelium, crystals of calcium oxalate. In some cases crystals of hæmatin have been observed."

Certain peculiarities as regards the time of appearance of the hæmorrhage, as regards the act of micturition, and certain peculiarities of formation of the coagula passed, are apt to lead to a fairly accurate knowledge of the location of the hæmorrhage.

In this connection I recall an instance of an individual suffering with nephritic calculus, who passed on the next day following the onset of the colic a small cast of the ureter, strongly resembling an angle-worm. Inasmuch as in this case there was some dispute as to the diagnosis, the presence of this clot was important as showing that the ureter or the kidney which it drained was the site of the hæmorrhage-yielding lesion.

The blood may be detected quite readily by the microscope in cases in which it is not completely disorganized. In the latter event, however, the spectroscope may become necessary.

Bile in the urine is of importance only in relation to those diseases of the liver which are amenable to surgical interference—for example, hepatic abscess and some cases of biliary calculi.

Chyle in the urine (chyluria) is a very rare phenomenon. In such cases the urine has much the appearance of milk, sometimes mixed with blood. After the urine has stood for some time, a clot forms of an appearance suggestive of jelly. The presence of the chyle in such cases is due to a lesion of some kind affecting the lymphatic capillaries of the kidney. A few recorded cases of chronic chyluria have been found to depend upon the presence of the *filaria sanguinis hominis*, a rare and peculiar form of parasite. Mackenzie* reports a case of this kind.

The admixture of fatty material with the urine sometimes gives an appearance resembling chyluria. Ralfe† reports a case of this kind occurring in a patient dying of acute diabetic coma (*acetonæmia*).

Fibrin never appears in the urine except-

*Transactions Pathological Society, London, vol. xxxiii.

†*Op. cit.*, p. 166.

ing as a secondary condition in chyluria in which it forms the jelly-like clot already alluded to, and after hæmaturia in which disease casts of various portions of the urinary tract are often detected.

Mucus appears in normal urine sometimes immediately and almost always within a few hours after it has been voided. It forms in little clouds which finally settle to the bottom of the vessel. When placed under the microscope, we find in these cloudy deposits epithelial cells, mucous corpuscles, and coagula of mucus. In the female at certain times we may have an admixture of blood and pus corpuscles from the vagina, dependent upon the admixture of menstrual fluid and leucorrhœal secretion. This mucus is increased in amount by different diseases of the genito-urinary tract. For example, in vesical catarrh its amount is a fair, but not accurate, criterion of the condition of the genito-urinary mucous membrane. In some instances mucus presents itself in the form of longitudinal striæ resembling hyaline casts, but distinguished form the latter by their irregular outline, their comparatively greater breadth, and branched form. Mucus may be removed from the urine by adding to the cold fluid acetic acid, which results in its separation in the form of a flaky deposit. Filtration will then clear the urine completely. Turbidity resulting from boiling, consists either of albumin or of phosphates; the addition of nitric acid increases the turbidity in the case of the former, and clears the urine in the case of the latter.

Pus Corpuscles occur in the urine in cases of chronic inflammation. Under ordinary circumstances it is impossible to distinguish them microscopically from the mucus or chyle corpuscle. According to Peyer,* single pus corpuscles occur in almost every urine, especially that of women. As a matter of fact, the corpuscles described by Peyer are mucous corpuscles. The clinical features of the case must be taken into consideration in the differentiation of pus and mucus, as the microscope alone will not serve to distinguish them. Whenever the form of corpuscle presented by mucus and pus occurs in large numbers in the urine, the presence

*Op. cit., p. 54.

of pus may be inferred. Pus is invariably an indication of acute or chronic inflammation of some portion of the genito-urinary system. Pus corpuscles are about double the size of blood corpuscles, are opaque and finely granular, this granular appearance serving to conceal their nuclei, which, however, become visible on the addition of acetic acid. The pus corpuscles may be crenated or notched in appearance. When the urine is strongly ammoniacal they dissolve to a certain extent and coalesce into a mass, losing their form, so that the microscope develops only their nuclei. When urine containing pus is freshly voided, the pus corpuscles may present under the microscope the peculiar amœboid movement of the leucocyte.

Blood corpuscles appear under the microscope usually in the form of pale, reddish, amber-colored biconcave disks. Their form varies according to the manner in which they lie in the visual field. For example, when they lie upon edge they have a sort of biscuit form, but when lying upon their flat surface they present a dark centre with a lighter areola about it, and are apparently round or nearly so. When they remain in the urine for a long time, and particularly if the urine becomes ammoniacal, they become paler and of a globular form, and finally are completely dissolved, liberating their pigment.

Epithelium is usually found in normal urine, and is indicative of the same changes which occur in the stratum corneum of the skin, namely, the shedding of effete epithelium. This shedding of epithelium is not abundant under normal circumstances. In the presence of disease, however, it is increased, and we therefore find in cases in which there is an abundance of muco-pus or pus an increased quantity of epithelium, the form of which depends upon the site of the diseased process. In case of inflammation of the renal tubuli and urethra, the epithelial cells are rounded. The epithelial cells from the vagina and bladder are of the pavement variety, often hexagonal in form, nucleated, and not to be differentiated from each other. Caudated epithelium originates usually in the renal pelvis; this form of epithelium is sometimes spindle-shaped. In some instances of severe inflammation about the neck of the bladder caudated epithelium cells are exfoliated. Thus Peyer * describes a case in which a large quantity of caudated epithelium cells were thrown off after cauterization of the deep urethra.

Casts in the urine bear a more important relation to the medical diseases of the kidney than to those of a strictly surgical character. We may, however, find them in nephritis secondary to surgical diseases of the genito-urinary tract and in renal hæmorrhage. They may appear in the form of epithelial cylinders, which consist of an exfoliation of the epithelial lining of the renal tubuli entire. Hyaline cylinders or granular casts may be met with according to the form and stage of the morbid change in the secretory structure of the kidney. Blood and fibrin casts occur as a consequence of renal hæmorrhage.

The Condition of the Urine in the Special Diseases of the Genito-Urinary Tract

is what most concerns us as surgeons.

Injuries of the urethra, prostate, bladder, kidney and testis may give rise to blood in the urine. Hæmaturia from these accidents will be described in detail in connection with the general discussion of that subject. The appearance of the urine necessarily varies according to the amount of hæmorrhage and its location. When the hæmorrhage is from the urethra the blood is apt to appear in the form of a long pencil-shaped coagulum, the discharge of which is followed by a flow of fluid blood. The bulk of the blood appears in the first portion of the urine, the mid-portion being comparatively clear, but a certain amount of almost pure blood being extruded at the end of the act of micturition as it is forced out of the injured part by the contraction of the cut-off and accelerator-urinæ muscles. The blood in these cases is quite dark in the coagulum, but is of a bright arterial hue as admixed with the urine and following the act of micturition. When the prostate is involved the amount of blood in the urine may be small and escape in the form of a fusiform clot, or there may be considerable blood diffused throughout the fluid. In such cases also the contraction of the cut-off muscle squeezes out a certain quantity of nearly pure blood at the end of the act of micturi-

* *Op. cit.*, p. 62.

tion. Hæmorrhage from the bladder may give rise to clots in the urine, sometimes of considerable size, and where the hæmorrhage forms a coagulum in the bladder this will, when broken up, give rise to a large amount of débris of coagulated blood. When the urine is voided soon after the occurrence of the vesical hæmorrhage, its color is comparatively bright, but when it remains in the bladder for a considerable time it becomes darker in color. When the kidneys are involved the blood is apt to be uniformly diffused through the urine and to impart quite a dark smoky color. The urine may be perfectly opaque in any case of genito-urinary hæmorrhage, this being entirely dependent upon the amount of blood.

The special points in differential diagnosis of the source of the hæmorrhage will be discussed in the lecture on hæmaturia.

Blood may appear in the urine as a consequence of trauma of the testicle. This is certainly very rare, excepting as following the emission of bloody semen occurring under such circumstances.

Acute urethritis gives rise to the presence of pus and blood in the urine, the latter being sometimes in considerable amount. For example, in cases in which severe chordee exists and accidental or intentional rupture occurs, the blood is present in abundant quantity, and chemical tests develop the presence of albumin. There is usually also a considerable admixture of pavement epithelium.

Chronic urethritis gives rise to certain peculiar appearances which are worthy of consideration. In some cases the chronic inflammation is localized at some particular portion of the urethra; it may be posterior to an organic stricture. In such cases we have the appearance of the so-called gonorrhœal or urethral threads. These consist of little thready filaments floating about in the urine when freshly voided, and sinking to the bottom when allowed to stand. They are composed of mucus and epithelium rolled up. In some cases complicated by spermatorrhœa, or after an emission, spermatozoa will be found mingled with these threads. Free epithelium and pus corpuscles are also present; in some cases in considerable quantity.

When the neck of the bladder is involved we find caudate epithelium mixed with the pus corpuscles and thready filaments. In some instances of chronic urethritis a small plug of mucus of a grayish-white color may be found in the morning urine. This consists of the accumulated secretion of the night, and forms at the meatus.

Acute vesical inflammation causes the appearance of a hexagonal pavement and caudate pavement cells in the urine. These are mixed with an abundance of pus corpuscles and more or less blood corpuscles. On standing these materials form at the bottom of the fluid a grayish-white or reddish-brown deposit. The reaction of the urine in such cases is acid, unless the condition is an acute exacerbation of chronic vesical inflammation, or is a result of prolonged retention of urine from some special cause. Thus Peyer has an excellent plate representing the appearances of the urine in a case of acute vesical inflammation, with alkaline reaction, occurring in a lying-in woman whose bladder had been paralyzed by the application of forceps, as a consequence of which the catheter had to be used. Such cases are explicable by the entrance of bacteria into the bladder *via* a filthy catheter. This authority states, however, that although acute vesical catarrh is attended by acid urine and usually bacteria are absent, yet they may be present in spite of the acidity.

Chronic catarrh of the neck of the bladder often occurs without active symptoms of inflammation. In such cases the urine is acid and contains small flakes of mucus and epithelium, resembling somewhat urethral threads. The character of the epithelium distinguishes these flakes from the latter, for instead of the epithelium being round it is of the pavement (hexagonal-caudate) variety. In these cases the urine is apt to be highly acid if there is any obstruction or retention. It usually occurs in gouty patients and the specific gravity is apt to be high. In addition to the flaky material we have mucous corpuscles, and perhaps a few blood corpuscles. If bacteria are introduced from without by means of a dirty catheter or other instrument, the reaction of the urine becomes alkaline, and we have definite symptoms of inflammation; in such instances we find more

or less blood, pus, epithelium, and perhaps phosphates. These materials form in large quantity in cases of chronic obstructive disease of the genito-urinary tract. In some cases of chronic vesical inflammation, you will have evidences of a morbid condition of the mucous membrane in the form of pus, blood, and epithelial cells, and yet the urine will be acid. This is explained by Peyer* upon the hypothesis that a large amount of acid urine coming down from the kidneys is sufficient to neutralize the alkalinity, or, indeed, to make the urine acid, if voided speedily after its entrance into the bladder. The singular feature of such cases is the fact that the latter part of the urine, or the portion which may be drawn off by the catheter from behind the obstruction ("residual urine"), is of an alkaline reaction. The same phenomenon may occur in sacculation of the bladder. Stone in the bladder and enlarged prostate impart to the urine the characteristics of an exaggerated form of vesical inflammation, pus, blood, various forms of bacteria and phosphates being present in abundance, and the urine strongly alkaline.

Pyelitis does not give rise to conditions of the urine which are pathognomonic of their origin, particularly if, as is frequently the case, vesical inflammation coexists, either as a secondary or primary condition. As will be seen later on, inflammation of the bladder may by simple extension result in pyelitis; while, on the other hand, the irritating products of inflammation of the pelvis of the kidney may induce secondarily vesical inflammation. There is a form of pyelitis, however, resembling a simple chronic catarrh of the bladder occurring frequently in gouty patients, in which uneasiness in the region of the kidneys in combination with the appearance of more or less muco-pus and the characteristic caudate cells of the renal pelvis in the urine, enables us to diagnose the case with some positiveness. In such cases, however, if the neck of the bladder become implicated, the presence of caudate cells loses its significance.

We have in pyelitis pus, blood, and epithelium in the urine. The pus is inclined to be of a powdery consistency and to be more finely disseminated throughout the urine than is the case in chronic vesical inflammation. It is apt to be of a greenish color, from the admixture of hæmatin. I have recently seen a case in which an exacerbation of pyelitis occurred in a young man who suffered from stricture and vesical catarrh, during the progress of malarial fever. In this case the urine had a most peculiar greenish hue, very similar to what might have been expected from the admixture of vegetable matter. These special features of pyelitic urine unfortunately lose much of their significance from the frequent coexistence of vesical complications.

Abscesses in the vicinity of and discharging into the genito-urinary tract give rise to pyuria. In such cases the profuseness of the purulent deposit in the urine and its close resemblance to the pus discharged from abscesses in other situations should lead to a suspicion of the condition present. Even in cases in which the marked clinical features of the case should serve as a guide to a correct diagnosis, the source of the pus is frequently overlooked. Thus I have recently seen a case in which Dr. Parkes, of this city, had successfully operated for abscess secondary to disease of the hip-joint which had discharged into the bladder; the cause of the pus appearing in the urine in this case had been overlooked by several competent surgeons.

A case was recently referred to me of a woman who suffered from chronic inflammation of the bladder with discharge of an immense quantity of pus in the urine. This case upon investigation proved to be one of pelvic cellulitis with consequent abscess which had opened into the bladder. A free opening through the bladder with proper drainage resulted in the closure of the vesical opening of the abscess. The case passed from under my observation before the vaginal fistula had completely healed. In another instance the presence of severe vesical inflammation and an abundance of pus in the urine apprised me of the rupture into the bladder of a pelvic abscess from peri-uterine cellulitis. Fortunately in this case complete recovery occurred under antiseptic vesical irrigations.

Various neoplastic formations in the genito-

* *Ob. cit.*, p. 64.

urinary tract cause the appearance of certain characteristic materials in the urine. Thus we may have in cancer the appearance of distinct cancer cells or small particles of cancerous tissue. The cells of cancer are quite large, nucleated, the nucleus being often multiple, and are not unlike in some respects the ciliated cells characteristic of the mucous membrane of the pelvis of the kidney, and care should be taken not to confound the two. In villous cancer small filamentary particles are found in the urine, these particles or loops being covered with delicate epithelium. They may appear in the urine only after the introduction of instruments. Aside from these characteristic features of malignant growths of the genito-urinary tract, we have in the urine of such cases the characteristic products of secondary inflammation of the bladder or pelvis of the kidney as the case may be, from irritation or obstruction.

In hydatid tumors the hooklets of the ecchinococcus will be found coincidentally with the rupture of the cyst; the urine containing these hooklets, being diluted by the fluid contents of the hydatid growth, is of a low specific gravity and very pale, unless blood be present as may be the case from the rupture of the sac.

Tuberculosis of the genito-urinary tract may sometimes be diagnosticated by the presence of small masses of tubercular deposit, or, as it has been claimed, tubercle bacilli in the voided urine.

Surgical kidney imparts certain peculiarities to the urine. Thus it is apt to be increased in quantity with a marked diminution in the specific gravity. Erichsen * records a case in which the patient passed five pints of urine daily of a specific gravity of 1.003. In such cases the low grade of chronic interstitial nephritis secondary to urinary obstruction with dilatation of the kidney is to be suspected. The quantity of albumin in such a specimen of urine is either very small or *nil*. A few hyaline casts may be found, and possibly no renal epithelium whatever. The excretion of urea is usually sufficient for the needs of the economy, the relatively low specific gravity being compensated for by the large quantity of excreted fluid. It is to be remembered in this connection that, as already stated, the amount of urea may be small, yet may represent the total amount formed in the system by the retrograde metamorphosis of nitrogenized material.

In surgical kidney, complicated by purulent inflammation either of the renal pelvis or of the bladder, there is apt to be nothing characteristic presented upon urinalysis.

Acute nephritis concerns the surgeon only as a possible consequence of operative interference with the genito-urinary tract. Upon the supervention of this condition the urine becomes scanty in amount, and in extreme cases finally suppressed. What fluid is voided is of a dark color, smoky in appearance from admixture with blood, and of a high specific gravity. It contains blood casts, renal epithelium, a relatively large amount of albumin, and epithelium from the renal tubuli in the form of casts and also free in the fluid. Caudate epithelium from the pelvis of the kidney is also usually to be found.

Spermatorrhœa gives rise to the presence of mucoid material and spermatozoa in the urine. In many cases there is a relatively large quantity of mucus from hyper-secretion of the prostatic follicles. In some instances prostatic catarrh alone will give rise to quite a quantity of mucus without spermatozoa. In the majority of instances of this condition, however, more or less semen is present, probably because of the patulous condition of the mouths of the ejaculatory ducts, and an over-distended condition of the vesiculæ seminales as a result of reflex irritation of the nerves of sexual sensibility produced by the prostatic disease.

The presence of spermatic elements in the urine does not necessarily indicate spermatorrhœa. Thus the morning urine may contain semen as a consequence of prolonged erection, pollution, or intercourse during the night. The next act of urination following prolonged sexual excitement brings away with the voided urine in most instances a large quantity of mucus secreted by the prostate, Cowper's glands and urethral follicles, and in some instances a small amount of semen.

* *Op. cit.*, p. 717.

Peyer* states that he has found in certain cases of sexual excess and masturbation no spermatozoa, nothing being present except a few mucous and epithelial cells, and in some instances a large number of beautiful little coffin-shaped and pointed crystals of phosphate of lime. In such instances he claims the urine is acid, but the mucous sediment is alkaline. He states that he has been able to diagnose positively from this condition of the urine masturbation in young men who had at first positively denied it. I question very much the accuracy of his deductions from what seems to me to have been an accidentally correct diagnosis. Spermatic elements may be found in the urine in certain cases of cerebral and spinal diseases.

IS INEBRIETY A DISEASE?

"A negative answer to this question," says Dr. T. D. Crothers, "is an evolutionary growth coming into prominence, uninfluenced by legal rulings or personal opinions."

The modern scientific view of this question affirms inebriety to be a physical condition of disease, inherited or acquired, and at all times a modified form of insanity. The use of alcohol is, in many cases, only a symptom of degeneration, and in all cases it produces not only changes in structure and circulation in the brain, but kindles into activity latent degenerate tendencies, of which the result is an incapacity to reason, with imperfect control of the damaged senses. The inebriate cannot be a normal sane man.

In England a century ago, when executions for thieving were common, thieves and pickpockets committed the same crimes in crowds about the foot of the gallows. Today the execution of an inebriated murderer, where all the details of the crime are made public, becomes an object lesson closely followed by other inebriates, who commit similar crimes under precisely similar circumstances. The natural history of such cases is continuous punishment for inebriety, assault, theft, burglary, petty crime, and, finally, murder. Each period of punishment is followed by the same or a more aggravated crime. The purpose of the law is defeated.

* *Op. cit.*, pp. 106–107.

Correspondence.

MORE ABOUT CEREBRINE.

The following correspondence is a sample of many letters received from physicians, and may explain the more recent developments with reference to the alleged physiological action of "Cerebrine." It is not unreasonable to suspect, in view of the analysis of M. Delafontaine* detecting nitro-glycerin in a recently purchased specimen of "the only authorized" product, that the originator, learning his statements are not to be taken without corroborative experimentation, has determined that results shall be *found at all hazards:*

To the Editor of the MEDICAL AGE:

Polemical publications upon scientific questions have always appeared to me most distasteful, but I cannot help admiring the manner in which Parke, Davis & Co. have entered the lists against Dr. Hammond, of Washington. I see also that they had no alternative in the matter after he made his claims to the proprietorship of the word "Cerebrine." The advertisement called "An Apology," in the American Journal of the Medical Sciences, is exquisitely satirical and to the point. As regards my own position in the matter it is one of expectant attention merely, but when I read of the marvelous results from abroad and am in the position of watching a case of Graves' disease slowly but surely going to the bad I feel as though I am not doing my duty if I make no use of a substance that might prove beneficial in its effects even if inexplicable.

Sincerely yours,

New York, Aug. 20, 1893.

To the Editor of the MEDICAL AGE:

I have used nearly three vials of the New York make of Cerebrine in a case which should have shown some beneficial results if the stuff were any good, but the only effect

* Journal of American Medical Association, Aug. 26, 1893.

I got was intense pain at the point of insertion of the needle. As far as any permanent results are concerned, I believe that Brown-Séquard's juice and Hammond's extracts are boiled in the same kettle, with the difference that Dr. H—— is after the $$, regardless of principle.

Patch Grove, Wis., July 14, 1893.

To the Editor of the MEDICAL AGE:

I have just this moment finished reading Parke, Davis & Co's. advertisement under caption of "An Apology" to the medical profession for being led into the manufacture of certain organics or animal extracts by the visionary claims made for them by Dr. William A. Hammond, and I for one want to tender P., D. & Co. my thanks for partly showing this gentleman up.

As they remark in their apology, his conduct in the past is not calculated to inspire respect for any opinion advanced by him, as he is, and has been for some time past, regarded by the "*up to date*" portion of the medical profession as a "duck's voice" of the first magnitude, and what surprises me is that the firm of P., D. & Co. should have ever taken any stock in his claims for the organic extracts made after "his (?)" process.

His scurrilous and ungentlemanly attack upon Parke, Davis & Co. shows him up in his true light—that of a mercenary schemer; and I hope they will only continue to show him up in the future.

Falls City, Neb., Aug. 10, 1893.

CEREBRINE WANTED.

To the Editor and Readers of the MEDICAL AGE:

I will pay five dollars for a limited number of bottles of Hammond's so-called "Cerebrine," original issue. The substance as originally put out was in white glass, ordinary, two-drachm phials, with yellow label, and without *fac simile* of Hammond's signature across label. The fact the fluid was put out prior to June 1st must be satisfactorily established.

G. A. STOCKWELL.

650 Congress St. East, Detroit, Mich.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

J. M. CHARCOT.

French science has just been bereft of one of its most illustrious representatives.

Jean Martin Charcot was a Parisian in the purest acceptation of the word. Born in 1825, he scarcely ever overstepped the limits of his native city. His youth was laborious, and after having accomplished brilliantly his classical studies, he applied himself to medicine. From the outset of his career he distinguished himself by the sagacity of his observations, by the qualities of a noble mind, and by his ardent labor. He became in 1856 "physician of hospitals." A Fellow in 1860, in 1862 he was nominated physician to the hospital of La Salpêtrière, where he soon entered upon a series of lectures which established his fame. Instead of restricting himself within the limits of acquired knowledge, the Professor accepted and taught, with discriminating choice, all new ideas and all fertile and practical innovations.

Charcot did not confine himself to the conduct of his clinic at the Salpêtrière; in addition, he gave a course in external pathology at the *École pratique*. In 1875 he received the chair of pathological anatomy in the Faculty of Medicine of Paris, which he occupied until 1883. The Academy of Medicine was not slow to open to him its doors, and to accept him amongst its members.

Once in possession of so brilliant a scientific and medical position, Charcot proceeded to devote himself to the great researches which were to render his name illustrious. Since 1877 the learned master has elucidated with rare insight a large number of questions relative to the maladies of the liver, the kid-

neys, and the spinal marrow. He enriched physiology by contributing to the creation of the celebrated theory of cerebral localizations. All his investigations have borne their fruits; they deal with a multitude of problems in cerebral pathology and nervous diseases, and have been fertile in practical results, especially with respect to locomotor ataxia, medullary perturbations, aphasia, hysteria, and epilepsy. As has been justly observed by Dr. G. Daremberg in a recent necrological notice: "Charcot introduced order and precision in a host of medical problems which, before his day, were sheer chaos."

The principal work of Charcot was his investigation of nervous maladies. During many years the lectures of the master at the Salpêtrière on epilepsy, hypnotism, the different forms of hysteria, have attracted universal attention. In no official chair had anyone ventured to enter upon the study of this entire order of occult phenomena which, since the days of antiquity, have been the subjects of a passionate curiosity in the public, as well as the despair of scientific observers. Charcot wished to subject these singular phenomena to the scrupulous examination of the experimental method. He studied them with great insight, and was enabled to reproduce them at his pleasure, often revealing the existence of facts which, before his day, had been regarded as chimerical. Did the conclusions of the master never transcend the most absolute scientific rigor? This we dare not assert, but it is not the less true that he has rendered luminous with an unwonted light an entire domain of investigation previously shrouded in darkness. In these researches, as in all others accomplished by him, Charcot was not alone rewarded by new medical discoveries: he opened to science new horizons; he initiated numerous pupils and founded a school now celebrated under the name of the *École de la Salpêtrière*. This school is famous for the number of its scientific labors and the host of eminent men which it comprises.

Particularly at the Salpêtrière did Charcot distinguish himself by his genius for investigation, by the accuracy of his science and the authority of his speech. In this establishment he organized a large number of useful auxiliaries, founding there an anatomo-pathological museum, a laboratory for investigations, with complete photographic facilities for the registration of nervous phenomena, and, several years ago, halls for the application of electrotherapy. He introduced lectures which, in 1883, were transformed into courses in nervous diseases.

Charcot became a member of the Academy of Sciences in 1883. He has been president of the Anatomical Society, vice-president of the Biological Society. He was Commander of the Legion of Honor.

The great clinician was conducted to his last abiding place by all his friends amidst a numerous and chosen assemblage. The funeral ceremony took place in the chapel of the Salpêtrière, the master thuse ntering for the last time that hospital upon which he has conferred such a lustre by his instructions and by his labors.*

The printed works of Charcot have been numerous and lengthy. He has published a large number of memoirs, articles, and studies in chronic and nervous maladies, rheumatism, and softening of the brain. All his writings are known and valued by the practitioners of all lands. His lectures constitute one of his most delightful claims to celebrity, and have been translated into all languages. The scientific world will continue to consult and profit by them. But we shall no longer hear the speech of the master—that vibrant word which the speaker could always reënforce with eloquent gesture, and which never fell upon an unheeding ear.—Gaston Tissandier in *La Nature*.

TREATMENT OF MUSCULAR RHEUMATISM.

There is no class of painful infirmities with which the country physician has more to do than the myalgias, of which lame-back (or lumbago) and pleurodynia are types. Whether they are called muscular rheumatism or muscular neuralgia, makes little difference; it is certain, however, that these myalgias have neither the local signs nor the

*The chief mourner was M. Jean Charcot, hospital interne, a worthy pupil of his father, who will doubtless maintain the high dignity of the name bequeathed to him.

general symptoms of either typical neuralgia or typical acute rheumatism. By most modern authorities they are regarded as a *myositis* from cold (sometimes from fatigue), *i. e.*, a severe neuro-paralytic affection of the vascular network of the sheaths of the muscles of the part involved.

Prophylaxis consists in avoiding as much as possible exposure to cold and fatigue, and in the use of flannel under-apparel—in the observance of such hygiene as will keep the body in the best trim.

Locally, energetic revulsion by means of mustard poultices and turpentine stupes always does good, and, generally, the hotter these applications are, the better. Heat more powerfully than any other agent promotes the circulation in the congested capillary network, and the active processes of repair. Rest is above all indispensable.

The relief sometimes obtained from anodyne liniments (belladonna, laudanum, menthol, chloroform, ether, cocaine) is probably due to a diffusion of the local obtunding effect produced by these medicated liniments on the peripheral extremities of the sensory cutaneous nerves; the remote result often being an inhibition of the pain-centres in the cortex cerebri. Certainly the physician cannot count much on any benefit obtained by the absorption of these liniments.

A recent writer in the Médecine Moderne professes faith in the utility of gentle massage of the affected muscles, and has seen good results from galvanization.

Another remedy which might be used in many cases to advantage is gelsemium. This drug requires watching, but generally two drops of the fluid extract (P., D. & Co.) may be given every two hours to adults, with decided mitigation of the pain and a marked general sedation. It is in torticollis, however, that gelsemium has seemed to do the most good.

It is hardly necessary to speak of phenacetin, exalgin, or analgesin. Where acetanilid does not help, these will surely fail.

It is advisable for the physician to use acetanilid in its purity, and not depend on any of the compounds (trademarked or otherwise) in the market. He is a weak practitioner who habitually depends on the manufacturing pharmacist to compound his medicines for him, or who will administer medicines the composition of which he is not certain of.

THE DANGERS OF INCONSISTENCY.

"Good men tried and true" have experimented with Cerebrine (Hammond), and yet appear to have obtained widely different results. The earlier experimenters are emphatic in the assertion no action of nitroglycerin could develop from "Cerebrine" (Hammond) as supplied up to the time its character was called in question; in fact, samples were submitted to chemical analysis expressly to discover if an alkaloid or other foreign matter could be present, the tests for nitroglycerin not being neglected. Now that Dr. Brower and Chemist Delafontaine have discovered unmistakable evidence of nitroglycerin in relatively considerable quantities, one of two things must be evident: either there are two radically different preparations on the market bearing the label of the Columbia Chemical Co., or, the inertness of the product having been shown, the manufacturer has proceeded to make good his word by sophistication.

The very fact that the proprietor of "Organic Extracts" admits there are no ptomaines in his preparations (also corroborated by outside uninterested parties) is sufficient evidence a *nitrite* cannot develop spontaneously as the result of any process of maceration or other manipulation. The presence of nitroglycerin, therefore, if a fact, has yet to be explained.

It may be said in this connection that the "Extracts" put forth by the Columbia Chemical Co. prior to June 1st were in common white-glass, round phials with a plain yellow label; those giving evidence of nitroglycerin are, we understand, put up in triangular blue bottles with a *fac simile* in red of the famous (!) ex-Surgeon-General's autograph across the label.

If the Cerebrine of the Columbia Chemical Co. is being sophisticated with nitroglycerin, and sold without evidence of the presence of this dangerous element, there will probably soon be a pretty kettle of fish for the "ex-retired" to digest, with great legal possibilities to contemplate.

Book Notices.

MUSIC AND CULTURE. By Karl Merz, Mus.D.

"Be more than a mere player or singer; be an intelligent, many-sided musician—a thinking and fine-feeling musician. It is seldom one meets with a musician who writes of his art thoughtfully and with insight. Fifty years ago the musician philosopher was hardly known. With Schumann was ushered in a school of composers who could use their pens intelligently in treating of their music. The day has passed when a musician's learning and attainments are alone in his fingerends. He must needs have something in his head and heart. Whoever renders aid and service to the student in this broadening of his culture earns for himself unending gratitude."

It is with pleasure that we greet the appearance of a new work in this branch of musical literature, and that is "Music and Culture" from the pen of the late Dr. Karl Merz. Those of our readers who knew Dr. Merz, knew him not alone as the accomplished instrumentalist, the beloved teacher, the cultivated gentleman, but as the large-hearted, pure-minded, enthusiastic musician —musician in the best and fullest sense— striving for the betterment of his art, and the betterment of those around him through his art. The lines from his pen, which appear at the head of this notice, epitomize the writer's life and work; they sound the keynote of every striving, true-hearted musician's endeavor. That this collection of essays, lectures, and maxims will be gladly welcomed by an ever-increasing musical public, cannot be doubted. No musician who reads it but will be the gainer in thought and feeling and perception, in his attitude towards and understanding of the art he loves.

The compilation of "Music and Culture" is the work of the writer's son, Dr. Charles H. Merz, who has shown a refined taste in his selection of material. Copies of the work are to be had from Dr. Merz, of Sandusky. Upon the receipt of $1.50, a copy will be sent post-paid to any address in the United States.

G. F. A.

MCCLURE'S MAGAZINE.

I. "The Flyer" leaving the Grand Central Station, New York City. Drawn by Henry McCarter.

II. The Man with a Country: E. E. Hale. A personal sketch and an interview. Illustrated from photographs taken for this magazine. Herbert D. Ward.

III. How Cassie Saved the Spoons. A story. Illustrated. Annie Howells Fréchette.

IV. Surrender. Verses. Gertrude Hall.

V. "Human Document." Portraits of distinguished people at different periods of their lives: the Emperor of Germany, Eugene Field, Colonel Albert A. Pope.

VI. Dreams Go by Contraries. A story. Illustrated. George H. Jessop.

VII. The Tables Turned. A poem. William Wordsworth.

VIII. Pasteur at Home. With an account of a visit to his laboratory. Illustrated. Ida M. Tarbell.

IX. Stranger than Fiction. Hugh Brontë's courtship; the elopement of Hugh Brontë and Alice McClory. Dr. William Wright.

X. The Legend of the Elephant and the Lion. Illustrated. Henry M. Stanley.

XI. Song. Thomas Carew.

XII. At the Throttle. The life and experiences of an engineer of a limited express. Illustrated. Cleveland Moffett.

XIII. Among the Gorillas. A voice from the wilderness. With a portrait of Mr. Garner. R. L. Garner.

S. S. McClure, Limited, 743 and 745 Broadway, New York City. Price per number, 15 cents; yearly subscriptions, $1.50.

MISSOURI STATE MEDICAL DIRECTORY: Containing a carefully revised list of Physicians, Dentists, and Druggists, together with the Colleges, Hospitals, Societies, and Medical Journals of the State, arranged by counties for convenience of Society Secretaries. Pocket size, 120 pp., cloth, gold embossing. Published by The Medical Fortnightly, 1006 Olive Street, St. Louis. Price, $3.00, post-paid.

The title of this little book is about all the reviewer can find to say about it. Typographically it is neat and easily readable, but as to the accuracy or completeness of its information it is impossible to form a judgment. Presumably it gives what it purports to give,

and is therefore of value to the profession in Missouri and to those outside of Missouri who are for any reason interested in the *personnel* of the three classes covered by the Fortnightly's enumerators.

DUNGLISON'S NEW PRONOUNCING MEDICAL DICTIONARY.

A new edition of Dunglison's Medical Dictionary is announced as in press for early publication. It has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fullness of its definitions, ample explanation being its distinguishing characteristic. In the new edition much encyclopedic information, difficult of access elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value. A review will appear in an early issue.

CONTENTS OF LIPPINCOTT'S FOR SEPTEMBER.

Lippincott's interesting magazine contains: A Bachelor's Bridal, by Mrs. H. Lovett Cameron; In the Plaza de Toros (illustrated), by Marion Wilcox; Whom the Gods Love, by Edgar Fawcett; A Girl's Recollections of Dickens, by Elizabeth Wormley Latimer; The Crossroads Ghosts (Lippincott's Notable Stories, No. VII, illustrated), by Matt Crim; Uncle Sam in the Fair, by Charles King, U. S. A.; For Love's Sake, by Zitella Cooke; Forest Fires, by Felix L. Aswald; The White Amaryllis, by Margaret B. Harvey; Ishmael (illustrated), by Richard Malcolm Johnson; Hypnotism: Its Use and Abuse, by Judson D. Aland, M.D.; The Sleep of Death, by James Kay Philips; The Carthusian (illustrated), from the French; A Sea Episode, by C. H. Rockwell, U. S. N.; Don't: To Young Contributors, by F. M. B.; Men of the Day, by M. Crofton.

THE COSMOPOLITAN for September was a World's Fair number, replete with most accurate and charming illustrations of this entertaining fairy land of enchantment, and some scholarly articles on special features of some of the most interesting departments. It was not without its quota of interesting fiction, and its always instructive Progress of Science columns.

Notes and News.

Treasure-Trove for the History of Medicine.—

We have on more than one occasion suggested that a vast field of medico-historical research exists in Oriental, and more especially in Chinese, territory, and we have now to record an important "find" in confirmation of our surmise. This time it is the region beyond our Cashmere frontier—the hill country between Chinese Leh and Yarkand—that has been laid under contribution, and the treasure-trove in question is due to the sagacious inquiries of a Moravian medical missionary, Mr. Weber, whose station is Leh. He received it from an Afghan coadjutor—a past master in such investigations—and it consists of a series of manuscripts dating from the seventh century A.D., and dealing with medicine and its traditionally allied subjects of astronomy and witchcraft. The documents were handed by Mr. Weber to Dr. Hœrnle of the Bengal Asiatic Society, whose well-known skill in Oriental palæography at once recognized their tenor, as also the *matériel* on which they were written. This latter is identical with the paper still used by the Himalayan tribes, being composed of the same vegetable fibres, and not of the birch-bark employed for the writings brought to England by Captain Bowen. Dr. Hœrnle ascribes the good preservation of the manuscripts, first, to the dryness of the surrounding air, and next to their having been "sized" with white arsenic. He gives a translation of one of the spells for inducing fever, presumably as a punishment or in revenge—a spell eminently characteristic of its Chinese origin, and interesting not only to the medical historian but also to the student of popular superstitions. Such treasure-trove has another value—that of indicating the quarter in which manuscripts of more purely professional interest may be found, and of encouraging special investigation *ad hoc*. We may thus obtain, in time, the materials for a more systematic and coherent digest of the healing art in Central Asia than its Pharmacopœia—portentous in character as in bulk—has hitherto enabled us to form.—*Lancet*, July 22, 1893.

Therapeutic Brevities.

Benzoin vs. Peru Balsam as an Ointment Preservative.—F. Edel, Des Moines, writes: "About eight months ago I began a line of comparative tests to determine the relative merits of balsam Peru and benzoin as preservatives of lard in ointment. In these experiments the utmost care was used in each, and the ointments so prepared were subject to exactly the same conditions.

"In every test made, the superiority of balsam Peru was clearly proved. In two cases which the writer will mention, the condition of the samples was so different after standing for four months that a person would hardly believe they were both made at the same time and in the same manner except as to preservatives.

"Two samples each of oxide-of-zinc ointment were prepared, one with benzoin, the other with balsam Peru, and placed on a shelf where the same conditions would apply to both. The sample containing the balsam Peru was in good condition in each case, while the one containing the benzoin was granular and rancid. The tests were very rigid, as the temperature ruling was such that ordinary ointments became rancid very soon.

"Having quantities of these goods to prepare, the writer has, after thoroughly testing in various ways the merits of the two preservatives, finally adopted balsam Peru as not only the more efficacious, but much the handier to use, and is using it exclusively in the laboratory where employed."—*Druggists' Circular*, August, 1893.

Euchlorine in Diphtheria.—Ellis (British Medical Journal, May 13, 1893) has used a solution of chlorine gas in 200 cases of diphtheria, with excellent results. The solution is made by putting 20 to 30 grains of chlorate of potash in a *dry* eight-ounce bottle, and pouring upon it 10 minims of hydrochloric acid. The bottle is filled with water after all the gas is evolved, and the whole well shaken. The mixture is made palatable by the addition of glycerin. It may be diluted for very young children. If the child is too young to gargle, a few drops may be given every half-hour. It is most efficacious when used as a spray.—*University Medical Magazine*, August, 1893.

Inoculation of Measles.—Dr. Hugh Thompson, of Glasgow, describes nine cases in which he had inoculated children with fresh serum taken from blisters on patients suffering from measles. He believes that four were rendered immune, that in two the experiment failed. At the point of insertion of the serum slight measly-looking patches appeared in from one to two days and lasted for two or three days, accompanied with slight catarrhal symptoms. The serum is taken from small blisters, no larger than a measly patch, and used immediately and inserted by superficial scarifications.

Rosin Weed in Dyspnœa.—Dr. Beverly Robinson has found rosin weed of value in phthisis dyspnœa. He uses (Medical Record) the following formula:

℞ Ex. fl. Silphium laciniatum rad., ʒ viij.
Alcohol, ʒ xxxij.
Aquæ, ʒ xvj.

M. Filtra. S.: ʒ ss–ʒ j at a dose.

The remedy has long been used with decided success by veterinarians in "heaves" or horse asthma. The eclectics have long used it in dyspnœic states with success.—*Medical Standard*, August, 1893.

Purification of Water by Electricity.—It is reported that an "electric disinfectant" has been discovered by an electrician of New York, and, as a test, successfully applied to the purification of a large body of Croton water by Dr. Cyrus Edson. The details of the method are not given, but it is said that a powerful electric current passed through sea-water produces a fluid which has powerful antiseptic properties. This fluid in small quantities merely mixed with water containing nitrites, nitrates, and ammonium compounds, is said to dissipate these substances entirely.—*Medical News*, July, 29, 1893.

For the Cough of Pertussis.—

℞ Ext. belladonnæ, gr. j.
Aluminis, ʒ ss.
Syrup. zingiberis, }
Syrup. acaciæ, } ää f ʒ j.
Aquæ, }

M. Sig.: A teaspoonful thrice daily, or when the cough is distressing.

—*The Practitioner.*

Gallonol (a white crystalline compound resulting from treating gallic acid with anilin and treating the result with muriatic acid) has been found by Cazeneuve (Prog. Med.) of value as a local application in psoriasis. A 10-per-cent. solution is painted on. In chronic eczema it has proved of value in 10-per-cent. ointments.—*Medical Standard*, August, 1893.

Medical Progress.

THE THERAPEUTIC VALUE OF "CEREBRINE" (HAMMOND) AND "CEREBRIN" (P. D. & Co.).*—On three different days twelve men were selected for experimental purposes. The fluids employed in each case were: 1st, "Cerebrine" (Hammond), in original packages as obtained from the Columbia Chemical Co.; 2d, "Cerebrin" (Parke, Davis & Co.), also in original packages; 3d, A mixture of my own composed of 38 parts borax, 42 parts glycerin, and 40 parts water. The three fluids had very nearly the same specific gravity, and the same general appearance.

Experiment No. 1. June 6, 1893. Dose of fluids employed, *five* minims.

Series 1. Four men received "Cerebrine" (Hammond). At 7 A.M., prior to injection, No. 1's respiration was 17; temperature, 98.5°; pulse, 86. At 8 A.M., forty-five minutes after injection, temperature, 99°; pulse, 76. At 1 P.M., respiration, 15; temperature, 98.6°; pulse, 76. At 7 P.M., respiration, 14; temperature, 98.5°; pulse, 64. Averages for the day: respiration, 15.33; temperature, 98.554°; pulse, 76.15.

At 7 A.M., prior to receiving injection, No. 3's respiration was 16; temperature, 98.7°; pulse, 78. At 8 A.M., forty-five minutes after injection, temperature, 99°; pulse, 76. At 1 P.M., respiration was 16; temperature, 98.5°; pulse, 72. At 7 P.M., respiration, 16; temperature. 98.5°; pulse, 66. Averages for the day: respiration, 16; temperature, 98.56°; pulse, 69.538.

At 7 A.M., prior to receiving injection, No. 10's respiration was 18; temperature, 98.6°; pulse, 88. At 8 A.M., forty-five minutes after injection, temperature, 98.5°; pulse, 80. At 1 P.M., respiration, 18; temperature, 98.5°; pulse, 76. At 7 P.M., respiration, 18; temperature, 98.5°; pulse, 68. Averages for the day, respiration, 18; temperature, 98.516°; pulse, 73.380.

At 7 A.M., prior to receiving injection, No. 11's respiration was 15; temperature, 98.7°; pulse, 88. At 8 A.M., forty-five minutes after injection, temperature, 98.7°; pulse, 66. At 1 P.M., respiration, 16; temperature, 98.5°; pulse, 82. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 82. Averages for the day: respiration, 15.66; temperature, 98.546°; pulse, 82.769.

The averages for all who received "Cerebrine" (Hammond) were: At 7 A.M., before injection, respiration, 16.5; temperature, 98.625°; pulse, 85. At 8 A.M., forty-five minutes after injection, temperature, 98.8°; pulse, 79.5. At 1 P.M., respiration, 16.25; temperature, 98.525°; pulse, 76.5. At 7 P.M., respiration, 16; temperature, 98.5°; pulse, 70.

It is unnecessary to go over the results of Series 2 and 3, wherein four men received "Cerebrin" (Parke, Davis & Co.), and four more a solution of borax, glycerin, and water, further than to add:

"Cerebrin" (Parke, Davis & Co.) gave very little variation in results from those yielded by "Cerebrine" (Hammond), not enough to be of value on comparison. The third fluid was practically as effective as the two preceding. In no instance was the average temperature increased to the amount of 0.07 of a degree, and the highest average temperature reached was with "Cerebrin" (Parke, Davis & Co.).

Experiment No. 2. June 7, 1893. Dose, *ten minims* each of "Cerebrine" (Hammond); "Cerebrin" (Parke, Davis & Co.), and solution of borax in glycerin and water.

The average respiration at 7 A.M., prior to receiving injection, for those receiving Hammond's fluid, was 17.75; temperature, 98.5°; pulse, 80. At 8 A.M., forty-five minutes after the ingestion of the fluid, the temperature was in no instance elevated, and the average pulse had fallen to 72.5. At 1 P.M. the total average respiration was 18; temperature, 98.525°; pulse, 72.25. At 7 P.M., the respiration was 16.75; temperature, 98.5°; pulse, 69.

Experiment No. 3. June 13, 1893. Dose, *fifteen minims* each of "Cerebrine" (Hammond), "Cerebrin" (Parke, Davis & Co.), and solution of borax in glycerin and water.

The twelve individuals experimented with on this occasion were selected from those of the two previous experiments. Practically the same ratio as in the two preceding experiments obtained.

Further, as to all three experiments, the claims made by Dr. Hammond were in no instance borne out either as to pulse, respiration and temperature, exhilaration, flushing, wakefulness, increased quantity of urine, expulsive force of bladder and peristalsis of the intestines, increased muscular strength, increased power of vision, or increased appetite and digestion.

In addition to all this, I myself ingested on various occasions doses varying from five minims to one-half ounce of both "Cerebrine" (Hammond) and "Cerebrin" (Parke, Davis & Co.), without any appreciable effect; and so far as the assertion that a dose of "Cerebrine" (Hammond) induces insomnia is concerned, I am obliged to dissent. One-half ounce ingested at 8.30 P.M. did not in

* Abstract of Researches of Dr. G. Archie Stockwell in Medical News of August 26, 1893.

the least influence sleep, which was profound an hour and a half later.

There is but one conclusion to be formed, viz., that "Cerebrine" (Hammond), "Cerebrin" (Parke, Davis & Co.) so-called, and a solution of borax in glycerin and water, are equally efficacious—or rather, equally inert for good or evil.

DIET.—Old Dr. John Abernethy, the father of modern medicine and the Nestor who is credited with putting into circulation the blue pill, used to say to his patients that he regarded the stomach as the kitchen of the body, that when that source of nutrition was out of order the whole house would very soon be disturbed in proportion to its disarrangement. So firmly did this idea fasten upon him, that he was wont to attribute very many of the ills that the flesh of his patients was heir to, in great measure to the abuse of the digestive organs. Moreover, when the good old man came to die a natural death, full of years and honors, he whimsically insisted that his disease was all in the stomach, saying, "We all treat our stomachs ill when we are young, and when we are old they fail us." Of course it is most natural that the question of nourishment should occupy the attention of all who do affect the healing art, but it now seems wholly inexplicable that such extreme views should be maintained upon the subject as would justify the starving and bleeding of former days or the fantastical feeding or cramming of a more recent period. Not only in the days of Sangrado celebrated by Le Sage in Gil Blas, but away down to the middle of this century or later, it was the custom for the most reputable and respected members of the profession to bleed a patient for almost any inflammatory complaint—to bleed him until he fainted, to follow this up by a season of rigid starvation, and if anything was left of the patient after all this, he was bombarded with mercury to within an inch of his life. The almost universal procedure in the treatment of disease was first to bleed from the arm—apply cups drawing more or less blood over the part affected—and restrict to vegetable diet; this much as a matter of course. After that, treatment varied in severity, although strictly maintaining the stern discipline which denied water to those parched with fever thirst, and food to those famished with the hunger of convalescence. Then came reaction. The tonic or supporting treatment came into vogue in the hospitals of Ward's and Blackwell's islands, at Bellevue, and elsewhere. In all private practice the use of the lancet was discontinued, and patients were permitted with certain limitations to eat whatever they liked; until when the Prince of Wales fell ill of typhoid fever, and prayers had been offered for his recovery in nearly every English-speaking community, save Ireland and New York, there came in response to these prayers a certain Dr. Gull, who speedily became Sir William on his illustrious patient's recovery. Sir William, on being asked by what means he had wrought this miracle, is said to have replied: "Soup and wine were my only medicaments." Of course a system so sweeping in its negations was liable to abuse, indeed to caricature, so that within two years we are informed that patients suffering from neuralgia at the London hospitals were crammed with the richest broths and wines, far beyond their desires, and actually wrapped in cloth saturated with beef tea, so that the struggling patient would long for the scant diet and involuntary fasting of his outdoor life as tramp or pauper.

Physiologists tell us that the conformation and equipment of the human body, especially all that appertains to the digestive tract, would seem to indicate that man is intended for a mixed diet; and yet the way that whole peoples seem to thrive on a wholly vegetable diet and somewhat scanty withal must make us pause. The peasantry of the west of Ireland and of Scotland have fed for many generations on a diet of grain and roots, and yet to this day they furnish a formidable fighting element to the armies of Great Britain. Not only do the soldiery of these races garrison England's possessions from Canada's icy mountains to India's coral strand—but it is from these people almost exclusively that the athletic element is drawn, not only in Great Britain, but in this country. Our pedestrians, our base-ball players, pugilists, oarsmen, nay, even our circus riders, abound in Celtic names to such an extent as to show that however much our institutions may have fostered the pride and mettle necessary for emulative contests, the stamina dates further back, and that Duncan Ross, John Sullivan, Hanlon, came from an ancestry which never tasted meat. The diet of the French peasantry has for centuries consisted mostly of bread, yet they enacted the French Revolution and fought the marvellous battles of the First Napoleon. The soldiers of Hernando Cortez were fed on a sort of maize or Indian meal during a campaign that for a display of fortitude, courage and religious devotion stands almost alone amid the world's greater achievements.

It is related of Charles O'Conor, by acclamation one of the most brilliant ornaments

of the American bar, that after his third attack of apparently fatal illness, and after the last offices of the church had been administered for the third time, he rallied and appeared once more to confront his enemies—successfully—in the noted ring trials of '72. When this amazing vitality was commented on in the presence of his physician, that gentleman replied: "He's living on ten generations of hard riding Irishmen." All his life he had been a man of most abstemious habits, and, if report spoke truly, his hereditary tastes were derived from an ancestry used to lenten fare.

On the other hand, let us glance at the effects, so far as can be surmised, of an exclusively meat diet. The only large bodies of people who live almost exclusively on meat are the North American Indians—except certain tribes of the cattle-hunting natives of Buenos Ayres. The prairie Indians have done well enough in their way. They make excellent skirmishers. Given certain coignes of vantage, such as the lava beds, and a handful of Modocs could contrive to keep the U. S. army busy and perturbed for a year or so. But as an athlete the Indian scarce fulfills the promise of his dawn. He has been outfought at every point; white wrestlers have thrown him, white pedestrians have run away from him, and city marksmen from Creedmoor can show him how to shoot. Close investigation has shown that his health is poor, with a tendency to consumption far beyond the reach of cod-liver oil or firewater. Properly converted, he might doubtless make an excellent saint on occasion, but as a citizen the less said the better.

As for the South American beef-eaters of Buenos Ayres, I am informed by persons who have lived there that the first effects noticed in Irish or other European or even North American emigrants to that place are a steadily increasing sallowness of skin and a progressive shortness of breath, sometimes very distressing to people of such active habits, while, notwithstanding the extreme healthfulness of the climate, the people are not long-lived or energetic. How much of all this is due to meat diet it would be impossible to say; but it is difficult to avoid contrasting this state of things with the sight that greets you when riding on the outside of a Scotch or Irish stage-coach or of a Spanish diligencia. There the hope, or better still the display, of a few copper coins arouses the tattered boy population, who will follow the coach for miles, sometimes at full speed of galloping horses, in hope of a stray penny, often, alas, an American cent—not current.

People of extremely cold regions—either arctic or antarctic—have learned by experience the uses and comforting qualities of that form of hydrocarbon known as blubber—furnishing food, drink, and fuel to the half-starved and half-frozen populace; and here Nature's marvellous faculty of adapting the means to the end can be admired in the stomach of an Esquimo, which is capable of disposing of such dishes without complaint. It has been remarked how admirably the food supply, in both arctic and tropical regions, is adapted to meet the requirements of the denizens thereof. Travelers tell us that here in the temperate zone we can have no conception of the deliciousness and the refreshing qualities of tropical fruits when eaten in that climate. Moore is eloquent over the succulence of the native Bermuda pineapple, and even the grave Dr. Livingston literally makes his reader's mouth water when he describes the mangoes of Central Africa. Before the discoveries of the eminent German who now fills the public eye—I mean Professor Koch—the science of medicine was much occupied with the cure of consumption by dietetic or by hygienic methods, the inefficacy of all manner of drugs being freely confessed, and the myths of mind-cure not yet having been born—or, at least, christened by that name, for I suppose they always existed. There was the famous grape cure, which entertained consumptives some years with fruit and wine. Kelly's Island being devoted to the cultivation of grapes for this explicit purpose (by, I believe, a relative of the distinguished viticulturist, Nicholas Longworth, who claimed to owe his restoration to health to the Catawba grape), vineyards were soon established in many places throughout the country, and, doubtless, many were benefited by the change of scene and diet, open-air life and abounding faith which usually attended these experiments. It is possible, too, that some of the consumptives died, although no record of the fact was ever made known. Then came the sugar cure. Thousands of sick were housed where the steam from the boiling sugar-kettles could be inhaled, and for a time the press teemed with accounts of miraculous cures in this manner wrought; but in time the sugar-cured consumptives in Louisiana joined the grape-cured of Kelly's Island, and the same oblivion gathered in theory and victim. Then the liver of New England cod was induced to give up its oil, and it took another generation to find out that cod-liver oil does not cure consumption—only retards it. Then Dr. Horace Green discovered that in old New York, undrained and shaky, intermittent fever was everywhere

prevalent, while consumption was almost unknown; whence he proceeded to write a book to prove that these two diseases, springing evidently from opposite causes, could not coexist, so that the presence of one prevented the other. And this man was president of a medical college in New York City!

During the War of the Rebellion, many times the question of food became fraught with tragic interest. In barracks, and during the winter, the men of the Federal army fared comfortably enough, the supplies being ample and of excellent quality; but during campaign the difficulties of transport increased the perplexities of the commisariat, for it took five miles of loaded wagon-train to feed ten thousand men for a week; hence there was abundant fasting, if very little prayer. The soldiers almost literally lived on coffee, with occasional crackers and such vegetables as they could steal. For purposes of differentiation they were called by local satirists Feds; while our gallant enemies were stigmatized as Confeds, or, as they pronounced it, Cornfeds—and, sure enough, many and many a time have I seen the haversack of a dead Confederate opened only to show a pint of raw corn for his day's provender; and yet when Lee surrendered, we issued twenty-six thousand rations, although we could count only thirteen thousand bayonets stacked for surrender.

During the latter part of the war, I, being a young army surgeon, found myself alone in charge of a hospital at Harper's Ferry, in Virginia. One of my hospital stewards having been a French cook, and the means at my disposal being most ample, I determined to try what could be done in the way of treating disease with varying food instead of medicine.

Shortly before that period, a school of philosophers had sprung up in the prolific soil of Germany, numbering among them certain physiologists claiming to belong to the school of Moleschotf. These gentlemen, after much research, had come to the sapient conclusion that the soul is a secretion; that all theories pointing to a future life are at least hypothetical, and that the best thing we can do now we are here is to stay as long as we can and get what we can out of the situation.

This revival of sundry well-worn dogmas had at least the effect—so we are told by their spokesman, Herr Moleschotf—of stimulating original research into many subjects, but more especially that of food in its relation to improving health and prolonging life. Youmans had lectured upon it. Liebig now turned his attention to the table, and astonished us all by declaring that tea—hitherto regarded as a cup that cheers but neither inebriates nor nourishes—contains 15 per cent. of nitrogen, and stands high among the liquid foods. Others came forward and declared that alcohol is force, and all food resolves itself into force. This introduction of King Alcohol into the controversy had the confusing influence which might have been expected where the zeal of moral reform was brought to bear upon the cold and impassive facts of modern science.

For instance, one young enthusiast of the profession declared that for his part typhoid patients should get well without brandy, or perish in the attempt. Alcohol, in some form, continues to hold its place to this day in hospitals and dispensaries, and the London Practitioner came out with a series of articles on the dietetic use of wines. Having absolute control of my hospital, I very soon instituted a series of experiments which, in the main, tended to confirm the statements of Liebig. We speedily found that patients in hospitals and all persons leading a sedentary life must avoid too concentrated food, content themselves with less variety, and drink abundantly of diluent fluids; that coffee acted upon the liver and was altogether the best remedy for constipation and what was called a bilious condition; that tea usually acted in precisely the opposite direction, namely, as an astringent; that not hot poppies nor mandragora nor all the drowsy syrups of the East could bring the peace to a sufferer from malarial chill that would come of strong coffee, with a little lemon-juice added; that strong tea was almost a specific for neuralgia in its simple uncomplicated form; while turnips were found to be almost a specific in the simpler types of rheumatism common to young men, where the only predisposing cause was exposure to the elements. It soon became apparent that the milder types of intermittent fever disappeared during the tomato season; whereas certain languors and pains, having their origin in the de-nitrogenizing viscera, were relieved and abated by the free use of asparagus.

Having read that, many years before, the soldiers of the U. S. army, in some remote cantonment, had been fed on bread from unbolted flour, and the increased health and efficiency of the men of that detachment having attracted a great deal of attention, and given a boom to the then famous Grahamite movement in dietetics, that, too, was tried, with, in the main, satisfactory results. With the milk diet for worn and exhausted patients we had such a signal success that, whenever practicable, it was adopted for

many forms of indigestion and mal-nutrition, some of my patients declaring that they had not felt so well since they were weaned.—Samuel R. Elliott, in *New England Magazine*.

ALOPECIA.*—I have two patients to exhibit this morning. The first man is not bald, his hair has not as yet appreciably thinned, but he presents a diseased condition of the scalp which, unless thoroughly cured, will infallibly lead to loss of hair. The second patient is a good example of a special form of partial baldness termed alopecia circumscripta.

If you look around you in any public assemblage, you cannot fail to observe the numerous bald heads—I mean in men comparatively young—and you are likely to ask yourselves, why is loss of hair so common? Are there no means of preventing the misfortune? Why are men so much more frequently attacked than women? An hour may be profitably spent in replying to these queries, and, above all, to the second.

What is the cause of baldness; say, rather, what are the causes? In the first place we may divide the affection into three groups or varieties: senile, premature, and circumscribed.

Of the first I shall say nothing. The causes of premature baldness may be either systemic or local. Whatever influence or combination of influences depresses the vitality of the hair follicles depresses *pari passu* the nutrition of the hair roots which spring from those follicles. If the capillary circulation or the nerve influence of the hair-beds is deficient, the vigor of the hair must be impaired. Projecting into the bottom of the hair follicle, like a little bud, is the hair papilla. It is chiefly through this papilla, which contains two arteries and some medullated nerve fibres, that the hair is nourished, though the walls of the follicle, to a certain extent, also minister to the life of the hair.

Many systemic conditions affecting the quality of the blood, the vigor of the capillary circulation, and the influence of trophic nerves, lead to premature loss of hair. Not infrequently a weakness of the hair-forming apparatus is inherited, and in certain families most of the male members, a few years after attaining manhood, begin to notice thinning of the hair. This lowered nutrition of the scalp may and often does coexist with notable vigor of the digestive and muscular systems. It is the soft and silky hair which earliest perishes. Curiously enough, the victims of early baldness are almost invariably abundantly supplied with hair on other portions of the body: they have strong beards, hairy breasts, arms, and legs.

Apart from a hereditary tendency, habits which waste nerve force have much to do with the production of early baldness. These customs depend partly upon the exigencies of life in modern centres of population, and partly upon the self-indulgence born of wealth and luxury. The foundation of the trouble is often laid in the school-room. It is lamentably too much the practice, especially in the public schools of our great cities, to place an inordinate amount of work upon the child. Those who are gifted and ambitious injure their health: the nervous system is weakened, the circulation is enfeebled, dyspeptic difficulties arise, and sleep is disturbed. These factors are very apt to result in early baldness. Loss of hair is much more common among professional students than artisans. In adult life the anxieties, competitions, and responsibilities from which few can escape have an injurious effect on the nutrition of the hair. The excessive use of coffee, tea, alcoholic drinks, and tobacco has the same effect. Excessive stimulation of the genital organs is another source of early baldness. Many severe diseases occasion a fall of the hair. Even in children we not infrequently see the scalp more or less denuded as a consequence of scarlet fever. The hair often suffers, becomes dry, thin, or falls out, after an attack of typhoid fever. Erysipelas, typhus, and cerebro-spinal fever may produce the same result. The puerperal state sometimes occasions more or less thinning of the hair. Alopecia is a common manifestation of secondary syphilis, either dependent upon the quality of the blood or caused by lesions upon the scalp. In acute baldness due to serious constitutional disease the hair generally grows again when the health is completely restored. This is true even of syphilis.

I now call your attention to the first patient. He is 27 years of age, a carpenter by occupation. He has never suffered from any serious illness, is well built, apparently well nourished, but informs me that he is troubled considerably by indigestion. This is probably the remote origin of the disease of the scalp. He states that he has endeavored to pay proper attention to the care of his hair. He has been in the habit, especially since he has noticed the condition of the scalp, of

* Abstract of a clinical lecture delivered at the Medico-Chirurgical Hospital of Philadelphia, by John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Therapeutics, and Clinical Professor of Skin and Venereal Diseases in the Medico-Chirurgical College of Philadelphia.

having a wet shampoo every week. Once in two weeks is quite often enough to have this tonsorial operation performed. A too frequent use of soap and water is injurious to the skin and hair. Remember, also, that the scalp may be damaged by too vigorous manipulation with the brush and comb. As this man approaches, you will at once perceive that the collar and shoulders of his coat are covered with yellowish-white scales which have fallen from his head. Upon looking at his scalp and separating the hairs, you will observe that the surface is covered with dry, greasy, dirty-looking scales. In some places they are adherent, while in others they are loosened and ready to be shed. When detached, the scalp is somewhat hyperæmic. This is not always the case; sometimes the skin is normal in color, and again it may even be paler than usual. This person's hair has a dull and lustreless appearance. He is annoyed by itching of the scalp. The scales consist of a vitiated and dried sebaceous material mixed with proliferated epithelium.

This is a sufficiently well-marked case of what is usually known as seborrhœa sicca. This affection is the most frequent cause of premature baldness. Its evil influence upon the nutrition of the hair is immediate and local, although it is interesting to note how general and local causes co-operate; for the seborrhœa itself is, as a rule, dependent upon some deviation from perfect health—it may be due to anæmia, chlorosis; it may follow fever, or, as in the present case, may be the result of gastro-intestinal derangement. Seborrhœa is, if left unchecked, an extremely chronic affection. It lasts for years. The products of disease occlude the glands of the scalp, compress the hair follicles, and eventually cause atrophy of the hair papilla. The hair follicles are finally sealed up by the organization of new fibrous tissue. The subcutaneous fibrous tissue is thickened while the corium undergoes an atrophy which may reduce it to two-thirds or even one-half of its normal thickness. The fibrous elements of the skin are thickened, but its muscular tissue is diminished. The sebaceous glands, at first enlarged, are finally atrophied. The sudoriparous glands, on the other hand, are enlarged, and this circumstanee may explain the profuse perspiration of the scalp to which bald people are subject. Hyperidrosis of the scalp, I may incidentally remark, often precedes baldness.

While these anatomical changes are slowly progressing, the hair must inevitably suffer. The hairs are, if I may be allowed the expression, *squeezed out* of existence. As their beds fill up they become shorter and thinner until, the follicles being obliterated, they can no longer be reproduced. Baldness of this kind is necessarily permanent. There is not the faintest hope of a cure. We can, however, generally arrest the march of the disease. How important, therefore, it is to begin the treatment at an early stage.

The case of the man now before us offers a favorable prognosis. Though there is a large amount of crusting, the hair seems to be firmly implanted. He states that when he brushes his hair a shower of scales falls off, but that the hairs are not loosened. I do not detect any evidence of thinning. Our task must be, therefore, the removal of morbid products and the restoration of the sebaceous glandular system to healthy action.

I shall not have time in this lecture to do much more than allude to seborrhœic eczema, which, according to the teachings of Unna, really includes most if not all the cases heretofore denominated seborrhœa sicca. However this may be, a change of name, or even of our conceptions of the pathology of the disease, can have no effect upon its clinical features. Suffice it to say at present, that in seborrhœic eczema we have a fine desquamation, followed in course of time by the formation of large, fatty crusts, and finally the escape of an oily fluid which dries into yellowish crusts. The hairs are loosened in their beds, entangled in the crusts, and come away when these are removed. Seborrhœic eczema is thought to be of parasitic origin.

Other diseases of the scalp may produce baldness. Among these I may mention lupus vulgaris and lupus erythematosus, tinea favosa, herpes zoster, and pityriasis rubra. Eczema does not give rise to alopecia except in those rare cases where abscesses result; the loss of hair then corresponds to the area in which loss of tissue had taken place.

Let us now direct our observation to the second patient. This is also a male, 23 years of age, a baker. You see that he has on the left side of the head a bare spot, nearly round in shape and about the size of a silver dollar. Upon the vertex is another patch of about equal size. There is, in other words, baldness in circumscribed patches or area. Hence the name of the malady, alopecia circumscripta or areata. The bare patches are rather paler than the normal skin. A few unhealthy hairs spring from their surface. I find that the hairs around the margin of the patches can be easily plucked. There has been no itching. A peculiarity of the case (and this is characteristic of alopecia circumscripta) is that the baldness appeared abruptly. He went to

bed one night about two weeks ago with a full head of hair, and the next morning, when about to use his brush, discovered to his astonishment a bare spot on the side of the head. Five days later, with equal suddenness, the spot appeared upon the top of the head. The patches have not enlarged. They were as large at first as they are now. This is the general history of alopecia circumscripta. When patches are large, numerous, and coalesce, the baldness may involve nearly or quite the entire scalp. In such instances it can only be distinguished from ordinary alopecia by the different history. Circumscribed baldness may occur at any age. It is often associated with disease of the nervous system, as neuralgia or epilepsy, or develops from sudden shocks or frights. It may follow any severe disease. Our patient informs me that he has but lately recovered from a severe attack of typhoid fever. Certain cases of this kind are thought to be due to the action of a parasite, though an organism has not yet been discovered. At all events, it sometimes seems to be contagious in schools, hospitals, and barracks.

It is now in order to speak of the treatment of alopecia. From what I have already said you will anticipate that the treatment must be directed to its underlying cause, which, in most cases of premature variety, is dry seborrhœa. Before approaching the purely medical management, however, I wish to say something concerning the proper care of the hair as a prophylactic measure.

For its healthy growth, hair requires ventilation and sunlight. The custom of keeping the head so constantly covered has to answer for much baldness among men. Women are indebted for their comparative immunity to the fact that much of the time their heads are free from hat or bonnet, and that they bestow much more time and attention to the toilet of the hair. Soft, light, and perforated hats are less injurious than stiff silk hats. The sparing use of an animal oil is beneficial. Once or twice a week the head should be thoroughly cleansed with soap and warm water, avoiding an excess of soap. The comb should have coarse, smooth, and large teeth. If a fine-tooth comb must be sometimes used to remove fine scales or dirt, it should not scratch the integument, but simply be drawn through the hair. Rough brushing is also injurious. Hair-dyes are detrimental. The dry shampoo assists in maintaining the health of the hair. The wet shampoo is beneficial if not too frequently repeated. Singeing promotes nutrition of the hair which has suffered in consequence of fever.

And now as regards medical treatment. Endeavor first to discover the exciting cause. Strive to correct any disorder of stomach, bowels, liver, or nervous system which may exist. Insist upon the regulation of faulty habits of life. I am not referring to cases due to syphilis, which demand appropriate specific treatment. If the general health is much impaired, the individual must be placed upon a generous diet. A change of climate is advisable in such cases. Tonic drugs are of value, such as iron, quinine, strychnine, hoang nan, phosphorus, coca, cantharides, and kola nut. Cod-liver oil and arsenic are serviceable in some cases. Pilocarpine sometimes has a notable effect in stimulating the growth of the hair. It may be given by the mouth every other night at bed-time in $\frac{1}{12}$ to $\frac{1}{8}$ grain or more, but the hypodermatic injection of $\frac{1}{3}$ grain once or twice a week answers a better purpose.

As our first patient is troubled with indigestion, I shall order him to take hoang nan. This remedy is of double utility. It stimulates secretion of the digestive fluids, and it has a special influence npon the sebaceous glands. It may be combined as follows:

℞ Extracti hoang nan fluidi, f ʒ iss.
Extracti chiratæ fluidi, f ℥ ss.
Acidi hydrochlorici diluti, f ʒ ijss.
Aquæ menthæ piperitæ, q. s. ad f ℥ ij.

M. Sig.: Teaspoonful in water three times a day.

In cases which are associated with anæmia we should administer preparations of iron, manganese, arsenic, or chlorate of potassium. Sulphur is another excellent constitutional remedy; it is a normal constituent of hair and essential to its nutrition. Sulphur is beneficial in seborrhœa sicca when given in 5-grain doses thrice daily and for a considerable period.

Although general treatment has its place, local therapy cannot be neglected. In a case like the one before us the first indication is to clear the scalp of scales in order that our remedies may come into contact with the diseased surface. Scales are most easily removed by means of an oil freely applied. When the scales are large and thick, the parts should be saturated. A cap of flannel or oiled silk prevents the application from greasing clothing or other objects. Olive, linseed, or almond oil is useful, but the oil of ergot is still more beneficial—its mildly stimulant properties prolong its effect after the scales have been detached. If necessary it may be diluted with olive oil. I am also fond of mixing a small quantity of the oil of eucalyptus with the oil of ergot. A mixture of the last mentioned substance with an

equal part of fluid oleate of mercury, oleic acid, glycerin, or a 50-per-cent. solution of boro-glyceride, can also be recommended. If the surface is found red after the scales have been removed, only mild applications are permissible. If the skin is pale, more active agents can be employed. A hard soap containing chamomile or sulphur cleanses the scalp and moderates the morbid process. An emulsion of yolk of egg with lime-water answers the same purpose. An infusion of quillaia or soap-bark is still more efficacious.

In order to improve the nutrition of the hairs, we make use of stimulant applications, the strength of which must depend upon the stage and gravity of the case. When any doubt exists, we should begin with mild preparations. Among the articles which may be employed are table-salt, carbonate of potassium, glycerin and water, carbolic acid, Peruvian balsam, corrosive sublimate, resorcin, naphthol, and oleate of zinc. Tar, sulphur, or the iodide of sulphur in the form of ointment, are also advantageous. Ten grains of tannic acid to an ounce of glycerin is an efficient preparation. The use of jaborandi externally has proved of service. It may be used by mixing ½ drachm of the tincture with equal parts of glycerin and lanolin, and rubbing a small quantity of the preparation upon the head every night. Corrosive sublimate is used in the strength of 2 to 5 grains to the ounce of water or fat. A mixture of equal parts of glycerin and alcohol or cologne-water is of service. In cases requiring or permitting more decided stimulation we may employ alcoholic preparations, ether, turpentine, solution of ammonia, white precipitate ointment, chloral hydrate, mercurous oleate, thymol, chrysarobin, etc. In obstinate cases we may resort to veratrine ointment, tincture of cantharides, mustard, capsicum, or croton oil. Massage is a useful procedure.

One of the best methods of stimulating the glands and follicles of the scalp is by the application of galvanism or faradism. The interrupted current should, in the beginning, not exceed 3 or 4 milliamperes, applied by means of moistened sponge electrodes. I am much in the habit of using faradism passed through a brush with metallic bristles, the moistened sponge electrode being held by the patient. In the present case I shall order:

℞ Sodii boratis, ʒ j.
Balsami Peruviani, ʒ j.
Glycerini, f ℥ j.
Lanolini, ℥ j.

M. A little of this preparation is to be rubbed into the scalp night and morning after the crusts have been removed.

Circumscribed alopecia requires treatment adapted to the constitutional condition of the patient and the cause of the affection. General and local galvanism is an excellent method of treatment. As the patient before us has not fully recovered his strength after an exhausting disease, I shall put him upon the following mixture:

℞ Acidi phosphorici diluti, f ʒ iij.
Tincturæ ferri chloridi, f ʒ iij.
Syrupi simplici, q. s. ad f ℥ iv.

M. Sig.: Teaspoonful in water thrice daily.

As a local application in this case we shall make use of the ointment of the mercurous oleate. When the patches are pale, active stimulation is usually necessary. Ointments containing naphthol, thymol, sulphur, iodide of sulphur, cantharides, chrysarobin, turpentine, tannic acid, or veratrine are efficacious. Shaving the patches has frequently a beneficial effect, and singeing the hairs when they begin to be reproduced is also of utility. Sometimes it is necessary to use a blistering fluid, such as the tincture of cantharides, ½ drachm to the ounce of alcohol Small but rebellious patches may be painted once a week or ten days with cantharidal collodion. Large spots do not allow such heroic measures. As this patient is young, the ultimate prognosis is good, though treatment will probably be demanded for a considerable period.

THE PROPHYLAXIS OF SCARLET FEVER.—It has become a recognized fact that little or nothing can be done in the way of medical treatment that will either abort or mitigate the severity of scarlet fever. All that the physician is able to do, as in the other exanthemata, is to control symptoms. There is no question, at this date, as to the importance of antiseptically treating the throat even in the lightest cases, and that this is the only thing in our power to prevent serious invasion of the disease. As the sequelæ are always in proportion to the severity of the attack, we are prompted to control to the best of our ability all febrile symptoms of a severe type.

The one dangerous after-effect of scarlet fever—nephritis—leads us to administer throughout the whole affection such remedies, principally digitalis, as may have a diuretic effect. The danger of heart-complication can also be guarded against by the timely and continued use of ammonium carbonate. These two remedies are admitted to be the safest and most valuable in the treatment of this disease, as far as systemic effects are concerned, but these are necessary only in

proportion to the amount of absorption that takes place through the glands of the throat, from the putrid matter that forms about them. Observation upon this point has brought to light the fact that whenever the throat symptoms have been of particular severity, the case has always been a grave one; and it may be said that if there has been error in the treatment of scarlet fever, it may usually be found in laxity of attention in keeping the throat clean. Cases do much better on the half-hour application than they do by following the usual direction, to "clean the throat every two or three hours." But, with all this, we lose a certain per cent. of our cases in proportion to the severity of the epidemic.

The disease being preëminently a contagious one, it is to this point that our efforts should be concentrated as a sure means of controlling the disease. Scarlet fever could be effectually stamped out were we able to destroy the contagion. That, in a very small proportion of cases, this is done, there is no doubt. It is a well known fact that the products of desquamation are decidedly contagious for a long period after all symptoms of the disease have disappeared. It may be truly said that one susceptible to the disease may take it from one who has recovered, at as late a period as ninety days after desquamation first set in.

During the past three years, in an effort to ascertain the origin of contagion in the cases that have come under my notice, it was learned that at least 70 per cent. of all cases were either supposed to be due or were directly traced to contact with other children at school. As to the remaining 30 per cent., the source was either unknown, or else was ascribed to direct exposure. It seems as though all possible care is taken in every case of this affection to prevent contagion during an attack, and that after the patient has been pronounced well the board of health thoroughly fumigates the house in which the case existed. It is true, too, that all physicians, recognizing the contagiousness of the desquamation, use the best means in their power to keep the body disinfected—the most prevalent remedy for this purpose being carbolated vaselin, which has proved itself an insufficient means to combat the infection.

For a considerable time, knowing the antiseptic value of hydro-naphthol—which is equivalent to that of one-fifth of the same quantity of corrosive sublimate, and the latter remedy, if used for any length of time, having a tendency to produce ptyalism—a 5-per-cent. hydro-naphthol soap suggested itself. Daily washing with this has, without doubt, given the following two results, viz.: desquamation has been hastened, and contagion prevented. Until assurance had been established as to the efficacy of this after-treatment, a certain amount of care was taken to prevent other members of the family from coming into contact with the convalescent. A number of cases since then have been permitted to mingle with other children during desquamation, as long as the soap was used, and a single case has yet to be noted in which such exposure has led to the development of the disease.

The use of such an antiseptic soap insures, first, the absolute contact of the medicament, on account of the rubbing; second, the washing away, and at the same time the disinfection, of the loose particles; third, that the surface is left clean.

In the early days of desquamation, two or three washings daily should be required. After a period of one week, daily washings suffice. This should be continued for ten days longer, at which time all signs of desquamation have disappeared, if this treatment has been adhered to.

Were this method of the after-treatment of scarlet fever to be carried out by others, and found in their hands to be as successful as this report shows, then we shall have gained a great deal in the prevention of the spread of that affection, which gives a greater mortality among children than any other disease. It is with this in view that I recommend its use by others, that any failure in its efficacy may be reported.—E. P. Hershey, M.D., in *Medical News*.

New Ideas in Physiology.—The physiological programme of the Pan-American Congress was as follows: Dr. C. D. Hodge, Ph.D., "A Microscopical Study of the Living Nerve Cell during Stimulation;" Dr. H. G. Beyer, Annapolis, Md., "Some Observations on the Normal Growth of Muscular Development of the Human Body under Systematical Exercises;" Dr. Wesley Mills, M.A., Professor of Physiology in McGill University, Montreal, Que., "Hybernation and Allied States in Animals;" Dr. A. B. Macallum, Professor of Physiology in University of Toronto, "Absorption of Iron in the Animal Body;" Dr. E. T. Reichert, "The Effects of Lesions of Certain Parts of the Brain upon the Heat Processes;" Dr. J. G. Hernandez, Professor de la Universidad de Caracas, "The Number of Red Globules;" Dr. W. G. Thompson, "Notes on Methods of Teaching Physiology in the Lecture Room."

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Original Articles.

THE EMBODIMENT OF AN IDEA.*

BY A. J. STEELE, M.D.†

Nothing in the nature of man is more wonderful or more admirable than his ability to express in material form the thought of his brain, or that he can shape the actions of men, and even order events, in conformity to his preconceived ideas. That which was a seeming phantasy may become through his energy a living verity. He may not create, but he can fashion and form anew until he seems almost to re-create.

This thought finds illustration in each individual among orthopædic specialists, in our organization as an orthopædic society, and in our department as a division of general surgery. Before proceeding to develop these truths, permit me to borrow an illustration—which, though not in the line of our profession, yet demonstrates my thought—from a work quite familiar to citizens of St. Louis, and of which we are reasonably proud.

Those of you who entered our city from the east, crossed the Mississippi River on a bridge, marvellous alike in its conception and in its construction. A local historian says in regard to it, that "by the middle of the year 1868 the drawings and all the details of the bridge had been gone through with, and the mighty structure was complete in the mind of the chief engineer." A few years ago there existed the idea only, to-day witnesses the substantial embodiment of it.

The foundations of the abutments and piers rest on solid rock from 55 to 135 feet below high-water mark—the deepest subaqueous structure ever built. The sinking of these piers was a great engineering feat, full of interest. The masonry of each was built on the roof of an air-tight caisson, 80 feet long, 60 feet wide, and 9 feet deep, made of thick iron plates riveted together; the bottom was open, but water and sand were kept out by the force of compressed air. So as the stonework was laid on top, workmen underneath fed the sand-pumps, and the huge pile slowly sank 50, 100, 135 feet, until bedrock was reached. The men in the caisson were subjected to great air-pressure, the intensity of which reached a maximum of 65 pounds per square inch, 50 pounds above the normal, or more than four atmospheres. The physiological effects of long exposure to this pressure and of sudden release from it, were at times very severe. Over one hundred men were attacked with cramps and chills, and thirteen died as a result. I well remember that at the time we had in the hospitals many patients suffering from this cause. They came to be known as "bridge cases," and attracted professional attention and great scientific interest, giving rise to warm discussions in societies and journals.

Thus at such great sacrifice, and with not a few hindrances, the foundations were finally laid, marvels of solidity and strength. But this was only a part. The plan of the superstructure of the great bridge was as bold as that of the foundations, and even more original. And yet with confidence in the resistant strength of chrome steel, the artisans were put to work on arches longer and comparatively lighter than any ever before attempted. In due time the matured plans became fixed facts, and the mighty structure was reared, a lasting monument to the engineering skill of the age, consisting, as you now see it, of three magnificent steel arches supporting two roadways, the lower for double railway tracks, the upper a broad causeway for highway traffic. The central span is an arch of 520 feet, the longest in

* President's Annual Address, read before the American Orthopædic Association, Sept. 19, 1893.

† Professor of Orthopædic Surgery, Missouri Medical College.

the world, and of great strength. As you observe the slender arch formed of light steel tubes in 12-feet sections and only 18 inches in diameter, you marvel that in the strength of those graceful lines alone the passing trains are safely held above the "Father of Waters" seething in rapid current one hundred feet below.

The erection of the arches was effected by a new and novel method. The tubes, or ribs, were built out from the piers over the water, until from the two sides the half-arches met in the centre, and the span was completed. I recall the odd appearance of a central pier with these semi-arches extending out on either side without any under-support, like great wings, as though some monster had arisen from the deep and was about to take its flight to other realms. The closing of the arches was a critical moment. Would the two semi-arches, started five hundred feet apart, exactly meet? On one occasion a rise in the temperature so interfered with the engineer's calculations that thousands of pounds of ice had to be used to contract the metal sufficiently to allow the crown of the arch to be closed.

As to the sustaining capacity of the bridge: it is estimated that if the upper highway, seventy-five feet wide and nearly two thousand feet long, were crowded with men standing closely, and if the two tracks of the lower railway were occupied by as many engines as could be placed in line, yet with this enormous weight, less than one-sixth of the ultimate sustaining strength of the bridge (estimated at 29,000 tons) would be reached.

The approaches to the bridge also are exceptional examples of engineering skill. On the east side a high trestle-work supported on steel columns for a distance of half a mile affords easy access to the bridge-way. On the west side a double-tracked subterranean passage-way, a mile long, pierces the city under its busy thoroughfares, affording a safe transit for trains without interfering with street traffic.

The expense of the whole work, $10,000,000, was great, yet it will stand for ages an enduring monument of the skill of its engineer, Jas. B. Eads, and a marvellous illustration of our subject—that matured plans may become fixed facts, that the thought of the mind may find expression through the work of the hands.

In our daily practice, as new problems arise, or as we seek new solutions for old ones, we first plan the treatment, then put it in practice, the thought finding embodiment to the relief of our patient. Not a club-foot shoe, not a spinal brace, not a knee-splint, as we know them to-day in their efficiency, but what once existed in thought only. Some years ago, possibly thirty-five, two surgeons, 3,000 miles apart, entertaining ideas positive enough but diametrically in opposition as to the correct treatment of coxitis, devised splints, each according to his own ideas, and gave them to the profession to be extensively used. So to-day we have the modified Davis appliance with its extension and motion, on the one hand, and the Thomas splint with its fixation and immobility on the other, each the embodiment of the idea of its inventor Which is correct? The future will determine. If one is wrong, what great harm has been done! How important then that the precedent idea should always be based on correct pathological knowledge, upon the true indications, and upon correct mechanical principles, and withal be practical; then the embodied splint will endure the test of experience. Think of the thousands of orthopædic appliances devised, constructed, tried, and relegated to the store-room. So of many operative procedures that have been suggested, it is an open question whether it is wise to perform them. Take so simple a case as that of club-foot: should the plantar tissues be divided before the tendo Achillis, or should in all cases the heel tendon be cut first? Thus the mere mechanician, or the mere operator, does not make an orthopædic surgeon. The foundation for such an one should be an educated, disciplined mind, with broad study and earnest application. And once admitted within the portals of orthopædic surgery, earnest thought and study of appliances, operations and methods are necessary—certainly before giving them out as good things and new.

Recently, while wandering through the wondrous sights of the "White City," amazed and yet rejoicing at the marvellous progress man had made in the various departments of art and science—in the beautiful and in the

useful—I was prompted to ask, What had I contributed to make up the great fair by my daily work; what place had orthopædics in this unparalleled display of the world's wonders? None of the exhibits are ours. And yet, while the work we do is not for display, still it is important, as much so as any of the handicrafts claiming attention from a sight-seeing public, for our mission is to save life, the most precious boon of a benevolent Creator; to preserve the human form, image of that same Creator; to restore it when marred, and thus incidentally to change a misanthropic disposition to one of cheerfulness, and a helpless body to one of usefulness.

I have a picture called the "Iron Worker," showing the temple completed, and Solomon inviting the artisan builders to elect the most important one of their number to the place of honor at the right of the king. On unveiling the throne the seat was found already occupied by a brawny blacksmith. The indignant people clamored, and the guards rushed in to cut him down, but Solomon stayed them until the usurper should speak in his own defense. "Thou hast, O King, invited all craftsmen but me; but without the tools I fashioned how could these builders have raised the temple?" "True," decided Solomon; "the seat is his by right."

Life, the individual existence and condition, which it is our mission to conserve, precedes work of hands or fruit of brains, and is assuredly entitled to the seat of honor, and when rendered useless by maiming of the body 'tis ours to correct; what were otherwise a miserable dependent existence we are able to make both comely and useful.

Our subject finds illustration in our daily work. Given a deformity, having recognized the indications for treatment, we plan an apparatus, outline a method for relief, which through the skill of the mechanician, or by the labor of an educated hand, finds embodiment and brings relief to our patient. If it is new and practical we give it to our fellows, and the world is benefited by our ideas and by our experience. And it is just this that brings us together to-day, from far and near, that we may exchange experiences and tell which of our embodied ideas have proved worthy of repetition.

While the bridge was building, a hurricane swept over this section of the country; so great was the violence of the wind that cars were carried many feet away, a locomotive was lifted to the top of a fifteen-foot embankment, and great injury was done to the engineering works of the bridge, thus delaying its completion. This proved a suggestive reminder to the engineer that the structure should be made safe from storms however violent, and so a double series of cross bracings were built into the bridge, insuring its future safety against tornadoes. In like manner with us in the treatment of our cases, complications often arise necessitating modifications in our appliances or methods, until possibly improvement follows improvement and perfection is reached. No, I should not say perfection, for there will be work for the inventive genius of the coming orthopædist for many a year.

Again, the history of our Society affords a forcible illustration of our subject. Ten years ago I visited in a distant city one who, like myself, was interested in the correction of deformities, and we considered the possibility and probability of organizing a National Orthopædie Association. It seemed at the time a chimerical dream, yet the plans were matured, the scheme heartily endorsed by those approached, the necessary steps taken, and to-day your presence testifies to the full embodiment of our ideas. Six years have passed since this organization was perfected—six, aye seven years of uninterrupted annual meetings with increasing membership, and with general recognition at home and abroad. Surely our hopes are being realized, though not in their completeness; we are on a firm footing, and the future is assured. Already our publications form a valuable storehouse of orthopædic lore, commended and always eagerly anticipated by our brethren on the other side. That they will continue to increase in value and interest, is indicated by the number and variety of papers offered for your consideration at this meeting.

It has occurred to me that our annual volume could be made still more valuable should it contain not only our own choicest thoughts, the avenue through which we give our personal experiences, but also a reflection of what the whole orthopædic world has

done during the year. The progress of orthopædics might be epitomized by a committee of three, one member to take the French and Italian publications, one the German, and one the English-speaking countries. It is true that several of the leading journals publish abstracts of progress; which, however, are accessible to but few of our members, whereas if carefully preserved in our own volume all would be benefited.

No longer ago than last year we adopted a new Constitution and By-laws, under which we are now working. Further experience may determine the need for elaboration, or change in some particulars. Already one occurs to me, namely: Article 1, Section 2, should be amended. It reads: "A candidate for active membership shall, through the secretary, present a paper to the Association." I would add, "two months previous to the meeting at which his election is to take place; the paper becoming a part of the candidate's credentials, and may, if he is elected, be read in general session and published in the Annual Transactions." We ought also to determine to what libraries and journals our Transactions should be sent. Applications frequently come, but it is a question whether in all cases they should be granted. A standing rule would assist the secretary in this matter.

It is a commendable feature of our membership that, with scarcely an exception, we are engaged in public work—hospital, dispensary, or college service. The mass of our cases come from the lower walks of life. So, while we are second to none in the amount of our charity, we also have opportunity as teachers to illustrate the importance of our department and to correctly interpret the principles and practice of orthopædic surgery. It is not long since the profession innocently asked the meaning of the word, but already even the people are learning to understand it, and, without waiting for the family physician to recommend, come voluntarily to the orthopædist with their deformed and crippled children. I cannot too strongly emphasize the benefit that accrues to the teacher in the familiarity and mastery he acquires of his subject. It is a spur to study, to gaining a clear and definite understanding of his department. As a practitioner one's field may be limited, but as a teacher the whole subject is gone over. I would urge our younger members to seek, create, and accept such positions, even though humble the place. And to the student our department can be made exceedingly interesting, for there is so much of object teaching about it—the thought constantly finds illustration. We have bony specimens of deformity and disease, casts, mechanical appliances, and the patients themselves. In our clinical work the affections are such that they can be seen at a distance by a whole class at once—an advantage we enjoy over eye, ear, throat, and gynæcological clinicians. And shall I omit the ever attractive operative procedures? No; for it is ours not only to early diagnose, but also to therapeutically do whatever is necessary to prevent the deformity or to remedy it, whether it shall be by the application of a brace or the employment of the knife.

In this connection arises the question: What shall we teach? Answer: The prevention and cure of deformities whether of bone distortion or of joint function. In most cases apparatus is required, the construction and adaptation of which is our especial field; but operative procedures of whatever kind are ours also to do as cases may require. If I am permitted to perform a tenotomy, why not also cut, tap, or inject an abscess; open, scrape, or exsect a joint? The American orthopædist very early included in his practice chronic joint affections, especially those of scrofulous origin. But why limit ourselves to tubercular joints? Joints already deformed from whatever cause are referred to us, but why not take them during the active stage of their disease, properly treat, and happily prevent deformity and loss of function? Whatever the cause of the joint trouble, specific, neuropathic, traumatic, constitutional, all cases should be included in our department. When I first commenced teaching orthopædics in this city, the subject of articular affections was not, by our faculty, considered to be necessarily included; so, to protect myself and prevent misunderstanding I had my title to read, "Orthopædic Surgery and Joint Diseases." I observe that one of our Chicago members is doing the same. Let us everywhere insist upon this, and

educate the profession and people up to this idea. Whatever Barwell or Marsh include in their pages may be ours; and the sooner we disabuse the public of the prevailing idea that we are simply splint doctors, the better.

I must advise against the young graduate posing at once as a specialist. The longer he is in general practice, the better will he be in a special field. Five or ten years will give him none too long an experience in general work. He may have a specialty, but not limit his practice unless he has a special aptitude, or unless unusual advantages for observation and study have favored him. On a former occasion I suggested that one in our department should possess very much mechanical ability. The knowledge having been acquired, the individual is then ready for his outfit—the *armamentarium orthopædicum.*

People not only marvel at the amount of charity work we do, but also at the unselfishness in giving our inventions and experience to others. They say, "Why not patent the machine and make money thereby?" not knowing that it is contrary to the spirit of our calling. No; we give to the world whatever we have that is new and good; we even vie with each other in the celerity with which we shall tell what we know, jealous lest some other one shall, on a given subject, get into print first. Liberal in our views, charitable in our acts, and benevolent to all—this is our animating spirit.

I am prompted to this thought by having recently noticed that Wm. A. Hammond threatened suit against a drug house for manufacturing "Cerebrine," "Cardine," etc., on which he claimed sole proprietorship of some sort;* and also by learning incidentally that a prominent orthopædist had patented his invention—a woven-wire corset. By such act this gentleman has placed himself outside the pale of our recognition—you and I would resort to many an expedient before paying a royalty on a wire splint.

In another way, and in one rarely suggested, does the beneficent work we do find important results. No one can tell how radically changed have been dispositions and temperaments, otherwise doomed to moroseness and misanthropy, by the correction of a congenital or acquired deformity. Had the infant Byron been born in our day, his club-foot would have been corrected, and it is not unreasonable to believe that the mighty genius, which gave itself to hated satire and immorality, would have sung ennobling verse, and virtue's sweet refrain. We full well know how sensitive are the deformed, how shrinking and how rebellious. A lad of fifteen recently told his mother in my presence, that unless she insisted on my straightening his bowed legs, he would jump into the river. Another with Pott's disease, a marked misanthrope, voluntarily lay on a board for weeks and piled ponderous books on his chest to prevent any increase in the deformity. Sufficient note is not taken of the good we do through correcting physical deformities in the way of changing sullen dispositions and correcting evil temperaments.

A few words as to hindrances—things that militate against the rapid success of the individual specialist, and of our specialty as a department of surgery. On our own part there may be want of familiarity with the subject, and an inability to do and perform, or one may have an unfortunate mannerism. It is quite a knack to get on well with children, a faculty one must acquire to be successful. The sympathy and co-operation of both the mother and child should be enlisted, for our cases are not to be won by a *coup de main*, but rather by a long siege. There must be much of the *suaviter in modo.* The most of our surgery is not brilliant, but requires skill, time, and patience; and such reinforcements as the parent and patient can give are not to be despised.

The quack has from time immemorial found a large field for his nefarious practices in our department; as the "qualified bone-setter" he has thriven in England, as the "natural bone-setter" in this country. There are several in this State; one especially in a small town in the western part derives a large income from an easily gulled public. In early days an Indian fighter, he accidentally learned of his wonderful gifts when thrown upon his own resources. Uneducated, and without a knowledge of medicine, he has founded a chartered Osteopathic medical

* These are claimed to be trademarked.—ED.

college, of which he is board of trustees, faculty, and all. That people, even wealthy and educated, can be found to have faith in this pretender and to submit to his severe manipulations, is remarkable. The qualified bone-setters of England, whom Mr. Thomas and others tell of, limit their practice to displaced bones or functionally disturbed joints; but here is one who, finding all diseases caused by deformities and dislocated bones, pulls and twists to cure. The peripatetic quack, by insinuating advertisements and promises to cure, secures many cases, much money, and does irremediable harm. The so-called Orthopædic Institutes, dubbed by a former president "surgical chambers of horrors," reap a rich harvest from the crippled unfortunates. Many cases have fallen under my observation of their malpractice and robbery. Their illustrated circulars are scattered broadcast, and paid agents furnish addresses. The surgical instrument-maker, with his show of bright and attractive appliances, is ever ready to give advice and apply his splint, though without knowledge of pathology, and quite irresponsible of results. And lastly, in our own profession, physicians, failing to early recognize the true character of the affections, and the general surgeon, jealous of the inroads we are making in their field, loth to give up their deformity cases, essay too often by a brilliant operation to correct, without the time and patience to personally care for the tedious after-treatment.

But the time rapidly approaches when legislation will drive the charlatan to the wall, and when the education of the masses will prompt them to intelligently seek relief for deformities and joint troubles from those especially qualified by study, experience, and practice.

I will say to our younger members that the correct ideas have not all been formed, nor have they all found embodiment. Consult the pages of late orthopædic works, Bradford and Lovett if you like, or Schreiber, and one is bewildered by the multiplicity of appliances figured for the relief of deformities. Surely the ideal splint for hip disease has not yet been found, otherwise so many would not be pictured from which to select. If one simple plan of treating club-foot were always successful, there would not be such a variety of methods suggested. The different appliances and apparatus which have been proposed for the relief of lateral curvature would easily fill my office rooms; and yet, who cures scoliosis? No, our art is young. The great achievements in our department of surgery are yet to be. Much has been accomplished, but greater trophies will yet be won. So the junior may take heart; earnest application along the lines of pathology and applied therapeutics will bring to him success and fame. When you or I meet a crippled child or a deformed adult in the street, a guilty pang shoots through the heart, for we somehow think it ought not so to be. The deformity should have been prevented, the disease should have been cured; that is the goal of our desires and efforts. We would give the sufferer a normal form and useful action. Often are we baffled, but each failure prompts to renewed effort and more careful observation. We dislike to be beaten; it is a warfare we are engaged in, and victory must be ours.

The time will surely come when cripples will be rare, such will have been the progress made in our art, and towards which this Association is contributing no small part. A few years back, orthopædics was not generally understood or appreciated, but now a score of institutions are teaching it distinct from general surgery; dispensaries and hospitals have their orthopædic departments; abroad are journals devoted especially to its interests, and at home regular reports on its progress are to be found. While our Society membership will never be great, because the proportionate number of cripples is not large, yet we will be in the front rank as a scientific, progressive organization, for that we are enthusiastic workers is evidenced this day by the number and variety of papers awaiting your consideration, and this too in the face of the scientific attractions recently held out at Washington and elsewhere.

It would be interesting to anticipate the day when the tubercle bacillus, a fruitful source of our deformities, shall have been chained, when more correct living shall have arrested rickets, when more rational training of the young shall have prevented spinal deflections; but your time and patience, already greatly tried I fear, will not now permit

us to further dwell upon the theme; we can only say, speed that day, and cherish it as an *ideal* which through your continuous studies and labors shall find *embodiment.*

THE TREATMENT OF POTT'S DISEASE OF THE SPINE.*

BY A. B. JUDSON, M.D.†

I think it is the general experience that in the middle and upper dorsal region Pott's disease continues longest before consolidation takes place; and here we have a most striking illustration of the fact that recovery is postponed by unfavorable mechanical environment. Joints in the upper extremity, free from the mechanical stress attending locomotion, recover easily, while those in the lower extremity, which bear the greatest burden, recover only after prolonged and extensive destruction; so, too, articular osteitis in the cervical region of the spine is easily curable, while in the upper and middle dorsal region relief and repair come only after long time and considerable risk.

To best assist nature to relieve this disease, the same general rules apply as in the treatment of articular osteitis in the lower extremities. We cannot cut short the disease by any operation whatever, but may expect with confidence (if we promote by our best endeavors) arrest of destruction and the beginning of repair.

What, then, can we do to put the affected vertebræ in their best attitude and to raise the defensive and reparative powers of the system to their highest efficiency? As in articular osteitis occurring elsewhere, we desire:

(1) To relieve the bone of the duty of supporting weight and concussion;

(2) To prevent the affected joint from motion.

The arrest of these two functions, weight-bearing and motion, is essential to good treatment.

It does not seem wise to keep the patient recumbent for the long period necessary. In the management of hip disease we put the affected limb to rest, so to speak, while the patient is up and about; but to induce perfect rest in Pott's disease is impossible. Since the patient must be up, and to a certain extent active in locomotion, our best resort apparently is to take what benefit can be had from the application of a lever making pressure from behind forwards in the neighborhood of the posterior projection, and counter-pressure from before backwards at two points, one above and the other below the level of the seat of the disease. In a limited sense this application relieves the diseased joints from the weight of the body, while the patient is up and about, because antero-posterior pressure thus applied transfers a part of the weight and concussion incident to standing and walking from the diseased bodies of the vertebræ to the processes which remain sound. Having thus (1) removed so far as is practicable injurious pressure from the diseased structures, it is obvious that we have also applied the most effective kind of retentive splint for (2) the arrest of motion in the affected joints.

It does not take much practical experience to convince one that efficient pressure applied in this manner is productive of good, though it may not at once arrest morbid action and induce cicatrization of carious bone—for these events we must wait for the natural reaction; but it is not difficult to believe that Nature will the more promptly intervene with reparative efforts if our mechanical applications relieve distress and substitute a feeling of strength for weakness and apprehension. A well applied support at once gives a degree of relief which finds plain expression in the face and attitude of the patient. As a matter of fact, a feeling of security and comfort is afforded by the use of a corset made from any of the materials in ordinary use. I will not indicate the defects of apparatus of this kind. The inexpensiveness of jackets, and the ease with which they can be obtained and applied, make them of the greatest service to a vast number of patients who otherwise would have no mechanical support whatever. But when and where it can be done it is necessary to give the patient the benefit of accurately adjusted antero-posterior pressure.

At the best, antero-posterior pressure, no

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† Orthopædic Surgeon to the Out-Patient Department of the New York Hospital.

matter how carefully applied, fails to give all the support which is desirable. This is because the leverage is deficient. In the vertebral column there is found no long bony lever such as is at hand in making a mechanical application for fixing the knee; there is, rather, a succession of irregular bones movable upon each other, which, from the nature of the case, impair the success of any attempt to arrest motion or support the column by pressure from behind forwards and counter-pressure from before backwards, because the pressure from before backwards will (a part of it at least) be expended in bending backward portions of the vertebral column above and below the projection. The force thus employed is, however, by no means wasted, as it secures an ultimate improvement in the shape of the trunk which is often characteristic of patients who have been thus treated.

The apparatus needed is essentially simple, consisting of two parallel uprights, united below by a pelvic band and diverging at their upper ends at the base of the neck, and curving over the tops of the shoulders. Pressure from behind forwards is made by two pads attached to the uprights at the level of the projection, and applied a short distance from the median line on each side. Counter-pressure from before backwards is made below by a strap passing from one end of the pelvic band to the other in front of the pelvis, and above by straps, one on each side, passing from the upper end of the upright through the axilla, to be buckled to the upright. The most important feature of a brace constructed to carry out these views is the use of mild steel for all the metal parts. The use of this material puts in the hand of the surgeon the power to modify the degree and direction of pressure to the changing shape, and to meet the increasing tolerance of the skin to pressure. The reaction of the skin should receive special and constant attention, and gentle and gradually increasing pressure should be made till the limit of comfortable tolerance is reached.

By patient attention to details, apparatus thus designed may with certainty be made comfortable and efficient. The diffused support furnished by a jacket is often secured by the addition, to the simple lever described above, of aprons and other pieces which add to the feeling of stability and security without interfering with the chief function of the apparatus, which is to make antero-posterior pressure. One hardly knows where to begin and where to end in the consideration of the details which demand attention in practice of this kind. I will close by saying that cheapness and cleanliness may be promoted by leaving the steel parts of this brace unpolished and covering them with a single layer of adhesive plaster, and then with strips of Canton flannel or silk cut bias and renewed without much trouble as often as may be desired.

IS THE PRACTICE OF MEDICINE NOT MATERIALLY JEOPARDIZED BY THE MODERN METHODS OF VENDORS OF DRUGS?*

BY HENRY L. COIT, M.D.

There is no department of medicine that has received so much thoughtful study, and, at the same time, been subjected to so much misdirected effort, as therapeutics; consequently there are in vogue to-day a vast medley of rational and irrational methods of treating disease. I am convinced there is no part of medical work which more urgently demands attention at the hands of physicians, in order to stay the progress of influences always at work to divert scientific medicine from its proper channels.

The term philosophical, in its connection with medication, deserves careful consideration. Upon a clear conception of its significance depends an intelligent grasp of the subject. Philosophical medication consists of therapeutic procedures induced from data furnished, first, by the natural history of the condition to be treated, and, second, by the natural history of the agent or agents employed. Such a course of action must of necessity be positive, because it is dictated by a logical course of reasoning. It will always be found in conflict with empirical methods, and with the sophistical deductions of those whose conclusions are the result of false reasoning. It will not admit of the prohibitory feature which excludes from the materia medica all agents not catalogued by

* Read before the New Jersey Medical Society, 1893.

an exclusive or sectarian system. Its distinguishing characteristic is liberty, that which follows demonstration. If a scientific reason can be given for any therapeutic measure, and this has been arrived at by the inductive (the only scientific) method of reasoning, the same may justly claim to be philosophical.

The development of rational therapeutics has been three-sided, and has been the result of researches in three widely different fields of observation. Three classes of workers have pursued the study from three separate starting-points, and have labored with earnest zeal until their paths were found to converge and unite. I refer to the Physiologist, the Pathologist, and the Pharmacist. The physician who is thoroughly equipped and who can justly lay claim to the use of the scientific method in the treatment of disease, must represent and embody in himself the findings of each of these classes of special workers. He must at least possess a knowledge of the physiological effects of the agents employed, of the pathological indications for treatment, and also have a wide acquaintance with the materia medica and its chemistry. With the present limitations of our knowledge, it must be admitted that only a part of our therapeutic measures are based upon the triple foundation thus indicated; but this state of things is rapidly giving place to an era of reason and precision. Through the labors of able men the empiricism which dominated the professional mind in the past is becoming obsolete, and instead is recognized the growing influence of the three important factors in the scientific method.

The *Physiological* factor in therapy is the first, and probably the most important, part of the triple alliance. Physiology bears the same relation to rational therapeutics that anatomy does to surgical diagnosis. It has to do with the experimental observations in the animal, the natural history of human health, and a correct knowledge of the action of remedial agents in modifying healthy states and functions. Very great advances have been made in the rational treatment of disease by investigations bearing directly upon the vegetative functions of nutrition, respiration, excretion, and secretion. Physiological chemistry has taught how to meet many of the abnormal conditions of these processes. So, also, with the more distinctly animal functions of the nervous, the muscular, and circulatory systems. The observations upon lower animals with drug effects, under varying conditions, have added to the *armamentarium therapeuticum* many instruments of precision. The chemical and microscopical study of the fluids of the body, the blood, and the several secretions, has so far enlightened us that to-day it is often a comparatively easy matter to maintain the normal balance between their constituents.

The *Pathological* factor is one the importance of which calls for general recognition, since it is an essential pre-requisite to the scientific treatment of disease: It has to do with clinical and post-mortem observations. With every advance in pathology there should be a corresponding advance in rational therapeutics. Pathology, consisting of the natural history of diseased states, embraces the *cause*, the *course*, and the *consequences* of abnormal conditions. The logical deductions from the data furnished by the causes of disease are often clear and conclusive, as in the therapeutic indications suggested by miasma, the parasitic affections, and the effects of bacterial poisons. The course of disease also suggests many valuable and rational aids, notwithstanding that this knowledge often furnishes strong indications for withholding interference. The consequences of disease, taken with a knowledge of physiological chemistry, open up to us a wide field for therapeutic findings, which is apparent to those who have been obliged to combat exhaustion, hyperpyrexia, cardiac hypertrophy, and the manifestations of vasomotor paralysis. The trusty agents, such as alcohol, caffeine, quinine, digitalis, and strychnine, by which we often hold the power of disease in grasp, are all instruments of precision in the hand of the pathological therapeutist.

The *Pharmaceutical* factor is also a part of this base upon which rests the superstructure of therapeutic truth. It has to do with the chemical and physical characters of remedies, and seeks to establish their trustworthiness. This knowledge is indispensable, and the time is not far distant, if not already at hand, when a physician will be seriously handi-

capped who has not a working acquaintance with pharmacognosy and pharmaceutical chemistry. The ancient apothecary was chiefly occupied with his concoctions and decoctions of impossible remedies. These were prepared as ignorantly as they were used by the empirics of those days. Their methods, illustrated by the *confectio democratus*, with its three hundred constituents, antedate all other factors in the development of therapeutic history, and pharmacy remained a wizard-like art until physiology and pathology called for more efficient aid. Modern pharmacy is the proper handmaid of medicine, and its development into what has become a scientific specialty is largely due to the demand made by the progress of workers in fields already mentioned.

The result to therapeutics, of these studies, has been to place it among the more exact departments of medicine. That this knowledge is available, is recognized by all. That such a triple study is necessary to an intelligent therapeutic procedure, is apparent. Thus equipped, the physician will never become a sectarian, nor be a polyprescriber; nor, on the other hand, will he renounce the materia medica and profess to be a therapeutic nihilist. He is proof against the probings of the vendors of proprietary compounds, and will not be attracted by the glitter of words that portray impossible virtues, but exercises a discriminating judgment in the selection of his remedies.

There are three classes of tradesmen in drugs: *The professional pharmacist, the charlatan, and the pseudo-scientific drug-vendor.* The scientific class has the first claim upon our attention. It embraces the manufacturing and dispensing pharmacist of the higher order, and excludes all dealers in medicines who are actuated by motives which are mercenary or purely commercial. For these we have nothing but the highest commendation. Their work is invaluable, and the practice of medicine is not jeopardized by their methods. These are they who make our pharmacopœias and dispensatories. We owe it to them that we have the alkaloids, the chemically pure salts, the assayed preparations, the bewildering host of reliable pharmacopœial preparations. They possess the skill requisite in compounding our prescriptions, and so necessary for the scrutiny of new remedies that are brought to our attention. It is a significant fact, and a well-deserved recognition of valued service, that pharmacy has been elevated to its proper professional standing, in that it has been given a place in the American Medical Association.

The charlatan represents a class of vendors who, while they do an immense amount of harm, do not constitute the most powerful hindrance to the practice of medicine. His methods are so plainly quackish and his wares are so loudly and lavishly praised, that the thoughtful and cautious are not misled. The only point of connection between the charlatan and physician is in the havoc wrought in the persons of those who have been drugged and poisoned. The nostrum vendor is purely commercial and always dishonest. He is properly characterized as an advertising liar and false labeler, and legal enactments should compel him to disgorge his ill-gotten gains. The secular press, and the weak religious press, are the messengers of his falsehoods and lend an air of respectability to an unmistakable fraud. These papers furnish wonderful accounts of spontaneous cures, Saratoga miracles, gold extracting gold cures, Indian bitters, electric pads, and, as though this were not enough, we find a world-renowned electrician lending himself to the sale of electricity by the bottleful, and a misguided public seeking for the secrets of health in a bottle of so-called "tonic," when, lo, it is *lager beer*. These facts are a disgrace, and a blot upon the fair name of our national intelligence.

The pseudo-scientific vendor is unquestionably our greatest enemy. He is the thorn in the flesh of the practitioner. His true nature is often concealed by a show of apparent truth. His reasoning, however, is weak, and his conclusions, though much believed by himself, are not logical and therefore not reliable. His motives are commercial and mercenary, although his advertising schemes are professedly *only* for the profession. He employs chemists to write him certificates, and superannuated doctors to edit his voluminous literature. The virtues of his products are largely imaginary and have no proper experimental or clinical observations

to justify their claims. There is no limit to the credulity of the human mind, and, with an imagination on the alert, there are no bounds to therapeutic faith. Therapeutic activity may be deduced from every known substance in the several kingdoms of the earth; and votaries may be found who ascribe to them some potential power in disease.

To particularize on the useless materials foisted upon us would be a waste of time. The shelves of our pharmacies are loaded down with them, and the shopkeeper is often made bankrupt in trying to supply the fickle demand created by the ubiquitous *sample* bottle.

It is reasonable to conclude that the philosophical practice of medicine *is* materially jeopardized, *in so far as vendors of drugs depart from the truth, and fail to be actuated by the scientific spirit in their work.*

There can be no question that the larger number of the statements made through the journals and in the circulars concerning medicines of unknown composition are either *exaggerated* or *altogether false.* The statistics which are appended are often fictitious, and even when they bear the semblance of truth the data are unreliable, because the conclusions are drawn from an insufficient number of cases or, perhaps, obtained by incompetent observers. The following is an example of these false statements, and could be duplicated many score of times if necessary: "A vegetable alterative and tonic" (composition only hinted at) is advertised in the pages of a leading medical journal. "Causes the elimination of specific blood poison, the repair of wasted and disorganized tissues, and the restoration of the vital forces to their normal activity. In the treatment of syphilis it supersedes the use of both mercury and iodide of potassium, and is a reliable remedy for the evil effects produced by the excessive use of these drugs. It is also specially indicated in all scrofulous affections and is invaluable in the treatment of eczema and other skin diseases, in chronic rheumatism, old chronic ulcers, etc." We fail to distinguish between the evils growing out of the patent-medicine plague and those resulting from this means of medication. Nor is the departure from truth to be wholly laid at the door of the vendor, for the physicians who lend themselves to these advertising schemes and write over their names about "filling the bill," "happy results," "marked success," "a veritable boon," and all concerning the imaginary effects on an isolated case of prostatic enlargement, well know that their statements are fabrications and absolutely valueless.

The true scientific spirit is foreign to all this class of work, and this is apparent in the unwillingness of the manufacturer to reveal the nature of the composition, or, if this is referred to at all, it is by naming the materials without the methods of combination or the quantity of each. It is passing strange that reputable physicians will endorse this trade-like spirit. A recent pamphlet, containing no scientific information, furnished one hundred and eighty-three physicians' testimonials to a preparation, the name of which was coined by the vendor, and the composition of which was referred to in two obscure lines on the inside of the cover. A distinguishing feature of this class of literature is the attention paid to the indications for the use of the preparation. Formula, not clear; indications, numerous; dose, liberal. Cardiac depressants are thus administered indiscriminately. A preparation of antifebrin in pill form, of unknown quantity and composition, advertised in a reputable medical weekly, with distinguished medical endorsement and said to be useful in ten different maladies, is actually compounded and put upon the market *by a wholesale grocer.* When physicians with a national reputation, professors in medical colleges, and high officers of a medical congress, will descend to these unseemly practices, where shall we look for wisdom?

It is a sad commentary on the intelligence of the medical profession that so many of its members are swayed by unscientific methods and allow a class of vendors to suggest, not only their course of action, but also the agents to be employed. The habit so easily acquired of using these ready-made preparations, is damaging to the professional mind, and each time the physician yields he drifts nearer and nearer to the ranks of the empiric.

"Use becometh a habit in a man." The law of accumulation is operative in the de-

scending scale, and it is not difficult to see that by frequently resorting to these time-saving combinations we must fall away from the more difficult practice of finding a reason for the therapeutic faith that is within us. The physician who maintains his scientific integrity against the inroads of the drug-vendor, not only works with precision but eventually will contribute his quota to the development of rational therapeutics.

A CLINICAL LECTURE AT THE VANDERBILT CLINIC, NEW YORK.

BY DR. FRANCIS DELAFIELD.

Case 1.—This man, 43 years old, a native of Syria, has been ill for six years. He complains of pain in the right lumbar region, which has prevented him from working for over a year; the pain has been getting worse, and extends into the side of the abdomen. He has lost flesh and strength. At one time he had an abscess opened in the perineum, which gave relief for a time; has noticed a swelling on the right side of the abdomen, which disappears at short intervals; states that in his urine there is constantly a white sediment. The urine has a specific gravity of 1015, and is acid, with a large amount of albumin and pus, but no casts—no tubercle bacilli in pus. The man's temperature today is 98°.

Upon palpation I find a distinct mass in the upper part of the abdomen, which moves a little with respiratory efforts; the dullness is continuous with the liver dullness. The liver is sharply outlined.

As this man is a Syrian, and our conversation with him must be carried on through an interpreter, his history is necessarily incomplete. With the physical signs present, a number of conditions might exist. The two most probable are: a suppurative pyelitis, with distension of the pelvis of the kidney with pus; or, tubercular nephritis. Another condition, which is possible but not particularly probable, is suppurative inflammation of the gall-bladder. The long continuance of pus in the urine would militate against the latter supposition; still, sometimes the diagnosis that seems the most improbable turns out to be correct. As regards treatment, there can, I think, be no question that the case is a proper one for prompt surgical interference.

Case 2.—This man, 48 years old, was in good health until three weeks ago, when he noticed his legs had become swollen, a condition that still persists. He also lost appetite; has some nausea, but no vomiting. Is not sleeping well. Urine with a specific gravity of 1015, containing a large amount of albumin, also pus and hyaline and epithelial cells.

The man does not look particularly ill, and his color is fairly good: but there can be no question he is suffering from a nephritis, and the important point to determine is, what form it is, since upon that point depends the prognosis—it would not particularly affect the treatment. The question is, whether this is simply an acute nephritis of three weeks' standing, or whether it is an acute inflammation added to an old nephritis which gave rise to no pronounced symptoms. In determining which of these two conditions exists, age is an important factor; and if this patient, instead of being 48, was 15 years old, the chances of its being an acute nephritis would be very much greater—in patients advanced in years we are less likely to get a genuine acute nephritis. Again, the condition of the heart and arteries is an important factor. In this man the radial arteries are somewhat tortuous and thickened, indicating a chronic endarteritis; the heart is hypertrophied; there is no murmur. In the third place, taking everything into consideration, including the low specific gravity of urine, ranging from 1011 to 1015, I think one would not go very far wrong in believing that this patient has had a chronic nephritis for some time which gave rise to no pronounced symptoms until three weeks ago, when there was an acute exacerbation of the disease.

As regards treatment: He should go to bed and remain until the acute symptoms subside—a person with an acute inflammation, generally speaking, is better off in bed. As to diet, he should at first be given only milk; after a time he can have one solid meal each day, and then gradually go back to his ordinary diet. As regards the nephritis itself, I think the use of the hot pack for an

hour each day would be more likely to benefit him than anything else.

Case 3.—Complains of a pain in the back and in the left side, also of shortness of breath and loss of appetite; his temperature is 100°; specific gravity of urine, 1025; no albumin in urine. Percussion reveals fair pulmonary resonance on the right side of the chest, but on the left side the percussion note is perfectly flat from beneath the clavicle all the way down. The heart is displaced somewhat towards the right side. The breathing sounds are absent on the left side; also the voice-sounds. He has been ill for about ten days; first had pain in the left side, then cough with slight expectoration.

This is a straight history of pleurisy with effusion, the development of which has been rather unusually rapid—the left side of the chest is nearly filled with fluid.

He should be aspirated immediately, for it is not wise for a patient to go about with his chest so filled with fluid. It will not be necessary to completely empty the chest, but simply take away a fair quantity of fluid; then after four or five days he can be aspirated again and the larger part of the fluid removed. It is not necessary to put him to bed, although it would be proper to keep him in the house. I will also prescribe digitalis and potassium iodide.

Case 4.—This woman complains that during the past five weeks she has had pain in the joints of the hands, the elbows, the ankles, and of the feet. Although painful, the joints have not been much swollen; and though the feet are distinctly swollen, it is due rather to general subcutaneous œdema than to the joints. She has had little or no fever, and at present has none at all. The pulse is regular. She has not lost her appetite.

Cases like this are commonly classed as subacute rheumatism, though as a matter of fact we really do not know much about them. There is no constitutional disturbance, such as belongs to cases of acute rheumatism; there is no evidence of any considerable degree of synovitis, which we ought to have with true rheumatism; and the swelling and œdema are outside the joints. Yet the symptoms are often severe, and for a working person it is a very serious trouble, as it may entirely incapacitate. The point of consequence is how to treat them, for the ordinary rheumatic remedies, as a rule, do not have much effect. Salicylate of soda, salol, phenacetin, the alkalies, oil of wintergreen—none are satisfactory, for they may be given week after week and the patient remain the same or get worse. Potassium iodide benefits some (but by no means all), if administered in doses of from 10 to 20 grains three times daily. Where potassium iodide does not afford relief, the best dependence is upon hydrotherapy—either the Russian or the Turkish bath, or the use of the cold or hot pack, or douches of hot or cold water over the inflamed joint.

Case 5.—This woman, 32 years old, gives a family history of rheumatism; was in good health until three or four years ago, when she began to have pain and swelling in the ankles and in the joints of the toes, which confined her to bed for several days. Two years ago she had pain and swelling confined to the right elbow-joint. At present she complains of pain in both knees, in the right foot, in the right elbow and shoulder, and in both hands. She has been treated for a long time with potassium iodide, the salicylates, colchicum, and the alkalies, with only temporary improvement. Her temperature is 99°; urine with a specific gravity of 1014, but no albumin.

Chronic rheumatism and arthritis deformans are the two conditions suggested by this history, and examination reveals the capsules of the joints thickened with a considerable quantity of contained serum; there is no thickening of the ends of the bones, and no creaking upon movement. This condition of affairs belongs to chronic rheumatism, and not to deforming arthritis. Chronic rheumatism is very difficult to get rid of; from the variety of drugs customarily prescribed, rarely more than temporary benefit is derived. Most of these cases do as well without medicine, and are best advised to visit one of the sulphur or alkaline springs, where the hot baths taken often afford considerable benefit.

Case 6.—This man is 39 years of age; last December he observed his skin was becoming yellow, and urine was dark-colored; also had pain in the epigastric region, which lasted for about a month—since then he has only had slight pain. Has lost a deal of

flesh and strength. His urine has a specific gravity of 1005, and contains a slight amount of albumin and a large quantity of bile pigment. Temperature, 99.8°. By laying two hands over the right side of the abdomen, the distended gall-bladder is readily felt; the liver itself is not enlarged.

Here we have an ordinary case of obstructive jaundice, with well marked symptoms and of long duration, the usual causes of which are: (1) chronic inflammation of the common bile-duct; (2) calculus impacted in the common bile-duct; or (3) a small growth situated in the common duct. If one can judge from the history of this man, the obstruction was gradual rather than sudden, because there was bile pigment in the urine before the general jaundice; such gradual obstruction belongs rather to a chronic inflammation or to a new growth than to the lodgment of a calculus. The fact he has had no pronounced fever at any time, also points to the absence of a calculus; indeed the man's general appearance is still very good after an illness of four months, although he has lost considerable flesh and strength, and this would contravene the probability of a malignant new growth—so we must balance the probabilities in order to arrive at a conclusion. I believe the man has a calculus impacted in the common bile-duct. And while I am not a very enthusiastic advocate of operative procedures in these cases, I should seriously consider such treatment in the case under consideration. It is always easier to operate on these cases when there is a dilated gall-bladder to cut down upon, from which the cystic duct can be followed up so as to get at the impacted calculus. This man will be kept under observation at the hospital for a week, and if there is no improvement in his condition an operation will be advised.

Case 7.—This young man, 24 years old, came from Naples two years ago; before and since his arrival he has suffered from chills and fever. He has been somewhat intemperate, and had a chancre some three years ago, about which time was noticed a tumor in the abdominal region. Four months ago he became jaundiced, and has continued so ever since; lately has had some vomiting. His urine has a specific gravity of 1022, contains no albumin, but some bile pigment; his blood has been examined and found to be normal. On examining his abdomen it is found that both liver and spleen are very much enlarged—the former from above downwards (the enlargement involving the left lobe more than the right), and also from behind forwards, so that the swelling can be distinctly made out just beneath the anterior abdominal wall—its surface is smooth and hard. The spleen is simply hypertrophied in the way usually found in a variety of conditions.

First it is necessary to account for this considerable enlargement of the liver and spleen. With cirrhosis of the liver the enlargement extends downwards into the abdomen—the organ does not bulge forwards. A tumor of the liver would be a possible condition in this case, as would also be fatty enlargement. From the hard, smooth feel of the organ, however, it is probably a case of waxy enlargement. The hypertrophy of the spleen is probably due to old malarial poisoning; it is also undergoing waxy degeneration. To be sure, the fact of the boy's urine being of normal specific gravity and containing no albumin is against the diagnosis of waxy degeneration, because in such cases we expect to find albumin. In spite of this, I think that is the most likely diagnosis. I see no indications for treatment, excepting to keep the patient in as good condition as possible.

Case 8.—This man, 38 years old, a painter by occupation, has had a number of attacks of inflammatory rheumatism during the past eleven years. Four years ago he had such an attack, which confined him to bed for three months, following which there was swelling of the feet, dyspnœa, and cough. His appetite is fair; his eyesight is failing somewhat; temperature, 99.2°; urine with a specific gravity of 1011, and contains a good deal of albumin; pulse fairly regular; the arteries are not thickened, there is a slight increase in tension, and the impulse of the heart is rather diffuse, the organ being enlarged towards the left; the heart's action is regular, and there is no distinct murmur; the breathing is more feeble over the right side of the chest in front than over the left side, and resonance gives a shorter sound

and a higher pitch on the right side than on the left; the breathing sounds stop about half-way down the chest on the right side; the lower half of the right chest is filled with fluid.

Apparently, besides having had a number of attacks of rheumatism, this man has been suffering for some time with a chronic nephritis, with exudation, and with hypertrophy of the left ventricle of the heart secondary to the kidney trouble; the swelling of the legs, and the fluid in the right pleural cavity, are also due to the nephritis.

As the man has just been confined to bed for three months with one disease, I do not like to send him back with another; still, he ought not to be going about. If he were living in a warm climate, I should not mind his being out of doors. In his present weakened condition it would not do to place him on an exclusive milk diet, although theoretically that would be indicated; he should be allowed at least one solid meal each day. I would advise digitalis, three times daily, and perhaps, in addition, potassium iodide and the iodide of iron, together. Perhaps also there might be an advantage in giving him a hot pack every day or every other day. If the fluid in his right pleural cavity does not disappear, it must be drawn off; there is no reason why the lung should be allowed to be compressed for any considerable length of time.

CERTIFICATES OF DEATH.*

BY P. C. REMONDINO, M.D.

Many of our States possess very lax laws governing or regulating the practice of medicine. The required qualifications in some States are so easily mastered that these commonwealths become the dumping-ground of all the refuse material of their more enlightened and exacting neighbors. What value can be attached to the medical statistics of such a State—allowing that it even makes an attempt in that direction—can be easily imagined. Should any of this refuse material be asked to name the affection under which its patient labors, the forthcoming explanation would be sufficient to paralyze an intelligent man—he would be unable to determine whether the catastrophe of the confusion of tongues at the Tower of Babel was being re-enacted, or whether he had run foul of some escaped lunatic afflicted with the delusion that he was a "natural born" physician. Such refuse material from the garbage or dungpile of the more intelligent and better governed States, makes one doubt the propriety of our calling the early centuries of our era "the dark ages," as this refuse can, without any effort, compete with the benighted of any age, race, or corner of the globe, for either dangerous and dogmatic ignorance or assurance. The difficulty with many of these men consists in the fact that their ignorance is not confined to medicine; their mental calibre and lack of perceptive development would unfit them for any occupation requiring the least exercise of a logical, comprehensive, or analytical order of reasoning. Their minds are still in that low evolutionary plane in which we find many primitive races, which prevents them from counting beyond three and who are just enlightened enough to worship a painted stick; to simultaneously or consecutively hold three or more views of a subject in hand for comparative or analytical purposes, or to conjure up one or more mental pictures, is for such minds an utter impossibility. Some of these ignorant practitioners enjoy much comfort, however, whenever a patient dies; they are in that happy oblivious state that prevents them from knowing whether the patient died through their medication or surgery, or from the disease, injury, or accident. Such men cannot logically be expected to return a proper or truthful cause of death. They are unaware of the dangerous results that may follow the exercise of their too primitive and tentative as well as too meddlesome and robust conception of our art, especially when added to the indisposition, disturbances, or changes induced by disease. Their poor victims are really more to be deplored than our disjointed, sadly mixed up and murdered statistics, as the sins and injuries committed in the name of science by some of these disciples of the celebrated Bombastus would outdo the murderous tortures of the Spanish Inquisition either in manner of execution or given results.

* Read before the San Diego Medical Society, April 7, 1893.

Intelligent and educated physicians should exercise the greatest care in properly making death returns. In the first place, the appended name should be sufficient guarantee that the return is correct in every particular; and in the next place, an attempt should be made by example to cultivate more correct ideas in those who have not enjoyed the same opportunities of advantages or education. Too many physicians do not attach sufficient importance to these premises, and are too often betrayed into very slipshod habits that are detrimental to the profession at large and discreditable to them as careful and observing men of science.

My attention was lately called to a death certificate signed by an otherwise very good man, but which was nevertheless faulty, misleading, and utterly useless for any statistical matter. According to this certificate the patient died of strangulated inguinal hernia. I am informed, however, that the patient had walked one and one-half miles to a railway station on the morning of the day on which he came to town, this being only one week prior to his death. The ostensible object of this journey was to purchase a truss for the relief of a supposed rupture of recent origin. The person to whom he first applied—an old physician—failed to discover any intestine in the tumor, and advised its being left alone. Other counsel, however, suggested an operation. The patient was operated upon and died. I do not call into question whether the conditions were such as to require any immediate or risky operation, or whether the man—being then 76 years of age—should or should not have been allowed to exist for his few remaining years to die in peace and from natural causes; that would be presumptuous. I simply question the propriety of saying that he died of a strangulated inguinal hernia.

How does a person die of strangulated hernia? He certainly had no such condition when able to walk a mile and a half, and it is hardly likely that the condition was obtained after the operation, unless a loop of intestines bound down by adhesions and in a state of strangulation and ready for future mortification were returned into the abdominal cavity in the vain hope that it would work out its own salvation. I do not believe that the intelligent gentlemen who performed the operation returned any bowel into the abdominal cavity in a state of strangulation, for that would have been poor surgery.

What, then, should have been designated as a cause of death in the certificate, and what, under the circumstances, could have been the possible and probable cause of death? The printed questions on the certificate call for both the primary and direct causes of death; in this instance, unless told that the conditions existing on the 23d of February were such as to endanger life immediately, it is necessary to look later on for a primary cause of death. If, for example, the tumor was only omental, and this omental protrusion was not strangulated or in any danger of so becoming at the time, the then existing conditions can no more be called a primary cause of death than the railroad journey which brought the victim to town. Peritonitis, either due to traumatism or to septic infection, is the only plausible manner or cause of death that we can conjure up, unless be added shock, the latter apparently not figuring in this case. If such was the cause of death, it should have been so stated.

Evidently there was no condition—either primary or direct—that could have dictated a strangulated inguinal hernia as a death cause. Had the death resulted from shock or exhaustion, the termination would have been painless and peaceable—I have seen a number of deaths occurring from shock and exhaustion due to the results of prolonged strangulation or the operative interference, and have always noted the accompanying calm and freedom from pain.

The properly returned cause of death may, with the unthinking, cause probable unpleasant and uncomplimentary remarks and unfavorable or unjust criticism to be made; it is better, nevertheless, under all circumstances, to stand firmly up to the truth and "shame the devil." One deviation from this principle will only pave the way for others, and there is no telling where we will then land. Has the patient died as a result of interference? If the interference was fully warranted, the physician has simply done his duty, and no one will attach any blame to him. If the surgeon's desires and tendencies have betrayed him into an unnecessary opera-

tion, then the calm and honest confession implied in a truthfully reported death cause will show the operator's candor and contrition—the conscience-disturbing accident will not occur again. Peter was possessed of this contrite spirit, and, after having denied his Master three times, fully repented and was restored to grace, whilst the misguided Judas, who had more vigorously and viciously strayed from the right path and gone to such length that a return was impossible, was far beyond the calming effects of confession, repentance, and contrition, and we all know but too well his sad and unhappy end.

As the French wisely observe: "It is the first step that costs." We should always so conduct ourselves as to have the firm support of our own profession. This we will unconsciously and unseekingly gain and hold by always doing right. In our anxieties to relieve pain or save life our judgment may at times be clouded and betray us into doing something which we will afterward regret; in such cases the body of the profession will always be as charitable as we are to ourselves. When, however, there exists a doubt —and at times a very serious doubt—and this betrayal into a wrong path carries the unmistakable appearance of having been induced by mercenary or selfish motives, then we will find that the body of the profession has a resenting conscience that if once aroused may make it very unpleasant for us. Even then, however, that broad charity that animates the professional breast is ever alive and is ever ready to receive the honestly contrite, even as a Magdalene was pardoned by the Master.

* * * A properly and honestly made death-certificate is often a valuable clinical assistant; while it might be regarded as of most doubtful utility to "the one gone before," it would nevertheless be of unmeasurable benefit to those left behind. I have in my mind's eye a very interesting case in point. A young girl of 18 had received an injury to the left breast by a fall; for several weeks the case progressed in gradually increased proportions until the crisis was reached, when something had to be done. At this stage of the episode, the most brilliant surgical talent obtainable was consulted, who promptly pronounced it a carcinoma. The girl was advised to relinquish her position and to prepare for the removal of the carcinomatous mass, as the operation and the subsequent repairs would require several weeks' stay in the hospital. The girl promptly gave up her place, and the day and hour for the operation, as well as the fee for the same, were agreed upon. At this stage of the episode, however, there entered a new and a disturbing factor which derailed the whole train of prearranged events. This was the girl's mother. Although of the laity, she nevertheless was very skeptical as to the occurrence of cancer in a girl of 18, and she also doubted the possibility of cancer being able to run such a rapid course; besides, her maternal instincts at once rebelled at the proposed mutilation. She arrived some hours before the proposed operation, and at once decided to postpone it until she could better inform herself. She proposed first to well reconnoitre the ground before assenting to any operation. Her coming was as unlooked-for as her withdrawal from the field, and then followed the second stage of the episode. Taking her daughter to another physician, and desiring to obtain perfectly unbiased judgment, all the previously divulged opinions were carefully kept in the background, the newly consulted being simply asked for his opinion. The physician, judging from the age and complexion of the girl, the history of the case, and its pathological appearance, could only see a case of abscess; after a careful search of its location he soon decided from whence it could be the most easily reached, and, without any further ado, at once aspirated the pus-sac, drawing therefrom eight and one-half ounces of pus. The girl was advised to retake her position and go on as usual, and under careful strapping made a rapid and perfect recovery—without even having lost a drop of blood.

Now the question arises, had the girl been operated upon, and had septicæmia supervened, and in view of the positive diagnosis given, what would have been given as a cause of death? and in the possible event of the person's death, what would have been the cause of death? Would she have died of carcinoma, or of what? The abscess, being figured out and totally displaced by the can-

cer diagnosis, could in no way come in either as a primary or direct cause. The cancer, being only in the operator's imagination, could not certainly be looked upon as a death factor; and to admit septicæmia would require the further admission that either there was an abscess or that thorough antiseptic precautions had been neglected. This all shows the absolute necessity of always making a careful diagnosis, as otherwise we are apt—even the best of us—to be where the fellow was, between the devil and the deep, deep sea, when it comes to filling out the certificate of death.

The above also teaches with what care and circumspection we should continually guard our tendencies. We feel at times as if physicians should daily be obliged to make an inquisition into their moral instincts and tendencies. For some it is the only safety. If we find ourselves growing too worldly and vain, as well as too much inclined to pose for the applause of the gallery—where are congregated the untutored, the incompetent, and the easily deluded—we should at once enter into a systematic process of effective penance and mortification, and chase this dangerous and unseemly devil from our flesh. Should we find that the god of mammon has entered our hearts and that the principles of the great Healer and Master are being dispelled, and that the love of gain and large fees is seriously obstructing and obscuring our judgment with a tendency to cast such necromancing spells upon us as will transform an ordinary and plebeian pus-sac into a dangerous and villainous but blue-blooded cancer, and otherwise obscuring our field of diagnostic vision, we should at once recognize, not only our serious position and danger, but also the dangerous position in which our miserable enchantments may place those who innocently and trustingly seek our professional aid; as under the influence of this enchantment we are apt to see cancer, ovarian tumors, hernias—either strangulated or plain—and other fell and dangerous conditions, requiring great carnage for their removal, when in reality they exist only as the armies, knights, necromancers, abductors and their victims existed in the mind of the valorous but demented Don Quixote.

Persons subject to this deplorable state of mind should carefully avoid any accumulation of worldly wealth; with increase of wealth comes the danger of a relapse. One would imagine that the contrary would be the case, but it is quite otherwise; the poor are seldom so affected. One of the most pronounced and recurring cases I ever encountered was only effectually and permanently cured after I had first induced him to sell all his mortgages and worldly possessions, and after having given the proceeds to Holy Church for the benefit of the poor he was induced to enter a Trappist monastery, where, surrounded by the emblems of mortality, and being no more enchanted by the god of mammon, he never again mistook a pus-sac for a cancer.

There is no doubt that in the proper and honest constructing of our death certificates we have a means of keeping ourselves reminded of the proper equilibrium that should exist between our medical knowledge and our moral conduct. If we feel that we cannot rely upon ourselves to detect the fatal symptoms of a deterioration in this regard, we should advise with some friend who will take the part of a mentor for us. Every community or medical society should choose some austere, impartial, and erudite medical censor to fill this necessary office. It would be safer for the comfort and health as well as the lives of the laity, the honor and usefulness of our profession, and for the correctness of death certificates, as well as for the reliability of our statistics.

ANIMAL EXTRACTS.

This recent fad in medicinal circles has certainly reached the climax of the ridiculous, by the absurd pretensions of an Eastern physician, whose mercenary methods and motives cannot be too strongly condemned. That any organic extract of an organ, such as the brain, should have any different effect upon the organism when introduced directly into the circulation than when ingested in the excellent dish known as "calves brains," is highly improbable; but that several months should be required to so modify its chemical composition as to obtain its full potency is too preposterous a tax upon the credulity of the profession. The proposition is not entitled to serious consideration.—*Clinical Studies.*

Correspondence.

AN INTERCHANGE OF CIVILITIES.

[COPY.]

WASHINGTON, D.C., Sept. 17th, 1893.

MESSRS. PARKE, DAVIS & CO., *Detroit, Michigan:*

I understand that you have declared your willingness to publish in the MEDICAL AGE all the testimonials obtainable from reputable physicians relative to the efficacy of the animal extracts made according to my process. I regard this, if I have been correctly informed, as a very fair proposition, and will at once avail myself of your offer.

It is, however, so utterly at variance with what I know of you, that I think there must be some mistake. Is it possible that instead of being the unconscionable brigands that I have taken you to be, you in reality have some sense of decency about you? I do not read, or even see, your various journals, and so I write to request that you will kindly advise me of the true state of the case.

If you really will publish such testimonials, I will at once take copies of those in my possession to a commissioner of the State of Michigan, have him compare them with the originals, certify to their correctness, and transmit them to you direct.

I am sure you will understand my motive when I express my unwillingness, under the circumstances, to trust the originals to your custody. If not presuming too much on your good nature I should like you to publish this letter in one or more of your various journals, and oblige,

WILLIAM A. HAMMOND.

[COPY.]

DETROIT, Sept. 19th, 1893.

WILLIAM A. HAMMOND, M.D.,

Cor. 14th and Sheridan Ave., Washington, D.C.

SIR: Replying to your communication of the 17th inst., will state that the text of the various medical journals with which we are connected is entirely under the control of their respective editors. If you desire publication of testimonials favorable to the efficacy of our animal extracts, we refer you to those gentlemen, or to the business manager who disposes of the advertising columns.

We are not disturbed by an expression of your good or bad opinion of our house, but will take pleasure in referring your request respecting the publicity of your letter to the editor of the MEDICAL AGE.

(Signed) PARKE, DAVIS & CO.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., SEPT. 25, 1893.

Editorial.

THE PAN-AMERICAN CONGRESS.

Since our last issue the Pan-American Congress at Washington has become a thing of the past. This initial meeting proved more successful by far than was hoped for, even by its most enthusiastic friends and promoters. The high professional standing of most of those in attendance, especially from the Latin republics, West Indies, and Canada, the character of the work done, and the results which will accrue thereto, all are calculated to add lustre to the undertaking and to perpetuate its continuance in future years.

The section work was of unusually excellent character. That on Pharmacology induced two notable resolutions whereby is established a "Commission for the Investigation of South American Drugs," and another to report upon the feasibility of compiling and publishing a Pan-American Pharmacopœia. Both resolutions were enthusiastically endorsed by the Congress, and particularly by the foreign members in attendance.

In an address before the Congress, Mr. Ernest Hart denounced in no uncertain terms the attempt to take away from the medical profession all standards of honesty and conduct by abolition of its code of ethics; he also paid deserved attention to quacks and quackery, and particularly to the class of men who seek newspaper notoriety at the loss of self-respect. At the same time sharp attack was made upon secret medicines, which "are never worth the paper upon which their advertisements are printed," and are "secrets only to the gullible public, for they have been examined in laboratories again and again and found to be either worthless nostrums or old, worn-out and abandoned remedies."

"Any medical man," declared Mr. Hart, "who dirties his hands by connection with secret-medicine companies, or who recognizes their products, should be treated with the contumely justly earned." "The practitioner who would sell the birthright of his good professional name for such a mess of 'pottage' should be considered a traitor to his profession and a traitor to mankind."

Incidentally Mr. Hart likened the medical to the legal code, which requires every member should "conduct himself as a gentleman;" if he did not so conduct himself, every member of the profession should ostracize him. One of the principles promulgated by the British Medical Association is to the effect no Fellow, Member, or Licentiate of either the College of Physicians or of the College of Surgeons should practice medicine with a view only to its pecuniary emoluments.

We are happy to note the remarks of the erudite and accomplished editor of the British Medical Journal were greeted with the utmost enthusiasm and applause, which, after all, evinces that the methods applied to ethics, which latterly it has become the custom to stigmatize as "old and effete," are still deemed worthy of the regard of the honorable and honest portion of the medical community.

The next Pan-American Congress is to convene three years hence in the City of Mexico, when, undoubtedly, a large proportion of the Anglo-Saxon membership will gladly avail themselves of the opportunity to visit the centre of Aztec civilization and erstwhile the home of the Montezumas.

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With the close of the Pan-American Congress a number of delegates, both native and foreign, accepted an invitation on the part of the United States Government to participate in a tour of the principal cities of the country; in consequence of which a large number visited Philadelphia, New York, Boston, Saratoga, Albany, Niagara Falls, Cincinnati, Chicago, and Detroit.

The excursion party reached the "City of the Straits" early on the 16th inst.; were met by a local committee of physicians, escorted throughout the city, visiting the parks and large manufacturing establishments; were treated to a most enjoyable banquet at the Russell House in the evening; on the succeeding day took boat up the St. Clair River for the Oakland House, where they were again banqueted; and, returning, left Detroit in the evening.

***

During the session of the Pan-American Congress in Washington, a medical editors' banquet was held. It is notable that the surgeons-in-chief of the Army, Navy, and Marine Hospital Services were absent, and that the Organic Extract man "got in his work" by responding to the Army toast—a selection stigmatized by the members of the Services as an "insult offered to every Army medical officer."

THE PHYSICIAN AS A MEDICAL ATTENDANT TO HIS OWN FAMILY.

During the present year two notable murder trials have occurred in the United States that were peculiar in that in both instances the victims were the wives of the criminals and the criminals themselves medical men. These trials naturally raise the question of the expediency of the attendance by a physician upon any member of his own family.

It is to be supposed the head of the family is its best guardian, and consequently that a father's or husband's care, especially in the line of his profession, would be superior to that of any outsider. Further, who should be so well acquainted with the characteristics of an individual member of the family as its head?

There are, however, times when the affairs of the family do not run as smoothly as they might. It is unfortunate also that when family jars occur there is always apt to be some prying eye or ear to witness or listen to some portion thereof. Careless remarks, of which the context has escaped notice, and which consequently are not understood in their real bearing, are often brought as evidence of facts that never occurred; and these things in cases of accident are invariably made much of in a court of inquiry, and if a criminal purpose is sought to be proved their weight is almost unmeasurable.

The Medical Examiner, recently commenting upon these relations, remarks: "If the

wife die under the care of her medical husband, notwithstanding he may have used his best efforts, false friends are sure to whisper what they have seen, to distort facts that by isolation are made to appear what they are not, and to prove in fact the husband had a motive for removing his helpmate from his path. Once the idea is started it runs like wildfire, and no power can save him."

"Another circumstance even imputed to the physician in case of unfortunate ending to family illness, is his supposed attentions to a female patient, and a consequent desire to take advantage of sickness of this kind to further his illicit desires. Here again is an opportunity for gossips to weave a web from which escape, if innocent, can be had only with the greatest difficulty."

"A third supposed motive is a question of property; the wife may be possessed of means in her own right which in her loving trustfulness she has, to his knowledge, willed to him in case of death. Such a circumstance is generally made known, especially in the country, strange as it may appear, and when disaster comes to the medical attendant, who is at the same time the husband, evil reports make no slow journey to the constituted authorities, and suspicions, if nothing more, are not slow to follow."

It is needless to follow out hypothetical reasons which may readily become realities. There are times it is absolutely necessary the medical man should act as a professional attendant to his own family—there are cases when he has no alternative; and he must lay aside sympathies and prejudices, must meet the emergency boldly, in the same manner as in the case of a stranger, and bring to bear his best skill and knowledge in the hope his efforts will not be judged harshly. Nevertheless, in the majority of instances, where such is available, he should at least avail himself of the privilege of consultation with his fellow practitioners. Better yet if he employ an outsider altogether. And there are few instances indeed where such outside aid cannot readily be had, or where such is not joyfully tendered when sought. It is, moreover, a matter of fact that, despite the petty bickerings, the jealousies, and the seeming hatred which oftentimes are made manifest (usually more manifest than real) between members of the profession in the same community, no sooner is aid of this character sought than all prejudices and unkindness are laid aside, and the visiting physician renders services such as would be freely given to one of his own family. Then there is a wise provision in all regularly constituted medical organizations, doubtless calculated to act as a safeguard in these cases, that every medical man and his immediate family while under his personal protection are entitled to the best skill and service of his medical brethren free of all compensation, except such as may be voluntarily tendered.

We cannot leave this subject, moreover, without remarking that the exchange of such professional courtesies as regards medical men and their families tends in no small degree to do away with the jealousies which are the bane and the disgrace of our profession. On more than one occasion we have known of circumstances like these just outlined transforming a semi-enmity into warm personal friendship and regard.

THE MEDICAL PUBLISHERS' ASSOCIATION.

One of the sequels of the recent Pan-American Congress is the organization of a Medical Publishers' Association, the officers of which are: Dr. Langdon B. Edwards, President; Dr. J. C. Culbertson, Vice-President; Dr. E. F. King, Secretary; Mr. J. H. Chambers, Chairman Executive Committee.

The following journals were represented: Cincinnati Lancet-Clinic, New York Polyclinic, International Journal of Surgery, Virginia Medical Monthly, St. Joseph Medical Herald, Therapeutic Gazette, American Lancet, MEDICAL AGE, Index Medicus, National Medical Review, Alabama Medical Age, New York Sanitarian, Medical Era, New York Journal of Gynæcology, Woman's Medical Journal, American Practitioner and News, Pacific Medical Record, Denver Medical Times, Medical Advance, People's Health Journal, and The Medical Visitor.

Questions of interest to publishers were discussed, and finally the meeting adjourned to meet at the call of the Executive Committee six months later.

An association of this character, if based

upon careful working details, with added uniformity of purpose and strict adherence to constitution and by-laws, should be productive of good, and we therefore wish it success.

HYPNOTISM.

Dr. Valentine, at the Pan-American Congress, outlined the medico-legal relations of hypnotism as follows:

The therapeutic possibilities of hypnotism are not denied. A patient who persuades himself, or is persuaded, that he can be cured by the hypnotic influence, is as well or better cured than by drugs or appliances that do not appeal to his view of the case.

The hypnotic state should never be allowed a status in law or morals. While it is certainly better that a hundred rogues escape than that an innocent being be punished, there is no human mind conceivable that can be induced by hypnotic suggestion to do what its owner knows to be wrong. Those "moral defectives" who cannot distinguish right from wrong are proper subjects for the insane asylum.

Many more propositions could be adduced, but if the foregoing are established, hypnotism will have its status defined, and be thus deprived of all power for evil. It must be clearly understood that no healthy being can be hypnotized without his or her full consent and co-operation; consequently any violation of legal enactment, or even unwritten code of morals, while the individual is under alleged "suggestion," is properly as punishable as if committed by one in full independent possession of mental faculties. With this view everywhere accepted and established, hypnotism will no longer be a menace to public weal.

A CURIOUS EFFUSION.

Lest our readers pass unnoticed the correspondence between William A. Hammond and Parke, Davis & Co., reproduced on page 563 of this issue, we direct particular attention thereto.

Coming from a medical officer of the U. S. Army disgracefully dismissed by Abraham Lincoln in 1864, the Washington letter is certainly a curious effusion—an illustration of the effrontery of the writer, and an indication possibly of the "good breeding" which he prates so much about in his recent printed circulars. He reminds us, in his forgetfulness of the past, of the ostrich who, having buried his head in the sand (by the whitewashing of 1878), imagines his whole body is hidden from view. He is so anxious to advertise himself and his nostrums that he is willing to invite notoriety at any cost, even to the extent of sacrificing what little self-respect he has left.

So far as publishing Dr. Hammond's testimonials is concerned, the MEDICAL AGE publishes no advertisements of any character in its text, nor will it make an exception in the case of the Organic Extract man. If he wishes testimonials of the class he offers published, the advertising space of this journal is open to his approach, and we have no doubt that if he can raise the required currency (or substantial endorsement) in this time of financial stringency, the business manager of this journal will be glad to accommodate him.

IN RE COMMA BACILLI.

Dr. John C. Sundberg, American Consul at Bagdad, after visiting the bacteriological laboratory of Surgeon-Major D. D. Cunningham, in India, writes the Pacific Medical Journal as follows:

"Dr. C. has made experiments with comma bacilli, and says there are *many kinds of them*. He showed me different cultures. But he has lost his faith in the creature and thinks him a humbug, and not at all the cause—at least not the sole cause—of cholera. He said the prisoners in the house of correction understand how to produce in themselves a diarrhœa—not cholera—though the orthodox comma bacillus was found in the discharges. Neither by threats nor rewards had he succeeded in getting at the secret of producing artificial cholera."

And yet the author of the monumental volume on Cholera, published by the Government, ignoring the negative evidence so often furnished by Surgeon-Major Cunningham, quotes one article of the latter that appeared to afford positive evidence.

When will scientific men learn that nothing is gained by sedulously ignoring evidence that does not happen to just fit their views? TRUTH should be paramount, no matter how it affects pet theories. Science does not permit of favorites or favoritism, and, above all branches, medicine should be free from such petty procedures.

BRAVO, MR. HART!

Our English visitor has the courage of his convictions, and is, moreover, gifted with an incisive and able style. In the October number of the Forum he gives his views on "Medical Etiquette, Quacks, and Secret Remedies" in a short but trenchant article. Whatsoever may be the reservations with which the American medical man may accept the views of the English Fearnaught, he will recognize the sincere purpose and high-minded sense of professional obligation which underlie his views and prompt their public expression.

IS PNEUMONIA INFECTIOUS?

Dr. Orvanos, of the Central Board of Health of Mexico, believes pneumonia to be contagious, and that precautions should be taken regarding it the same as in phthisis, cholera, or other diseases that are communicated from one person to another. Especially he believes lobar pneumonia to be infectious, its germs being preserved and conveyed in bedding, clothing, and dried sputa. A number of cases have come under his observation during the past decade that seem to satisfactorily establish the truth of his theory.

HINC ILLÆ LACHRYMI!*

Oh, my brethren! What a beautiful spectacle to contemplate! Verily the lion and the lamb have wallowed together; the venom of the serpent has been alloyed by the milk of the dove. If there is no other evidence that the Millennium is at hand, surely we may with tears of pride and joy point to the fact that the manufacturer of Non-Secrets has fallen upon the neck, so to speak, of the Organic Extract man. May they R. I. P.

UNTOWARD EFFECTS OF TRIONAL AND TETRONAL.

These are, unduly prolonged motor depressions, sleepiness, cephalalgia, sensation of a band around the head, inordinate movements, ataxia, dimness of vision, and paralytic weakness. Both hypnotics are *markedly* cumulative!

*Suggested by a recent copy of Stearns' "New Idea" which has reached our hands.

Notes and News.

The Index Medicus.—

The completion of the first twelve volumes of the Index Medicus afforded the publisher and editors an opportunity to give a revised list of the medical journals and transactions regularly indexed for this publication. We have gone to some trouble to count these in order to give the imagination a help in realizing the vast literary labor of a serial character carried on by the profession. Leaving out those of a semi-scientific, purely commercial, or popular order (these will make up for some in the list not accurately or wholly "medical"), we are astonished to find the total number is 1,119!

The medical profession should at least acknowledge the debt of gratitude due the editors of the Index Medicus, Drs. Billings and Fletcher, but more especially due the publisher, Mr. Geo. S. Davis, who nobly persists in paying the heavy expenses of the publication with little hope that the few subscriptions will ever equal the outlay. Such an action deserves unqualified thanks, though coupled with shame in confessing that, while we can support hundreds of so-called medical journals, we have to be the recipients of a charity (however willingly given) for the execution of a work so scientific and so useful to every literary medical man.—*Medical News.*

Monkeys and Their Sick.—

Monkeys, with some notable exceptions, are some degrees worse than savage men in their treatment of the sick.

On the new Jumna Canal, at Delhi, they swarm in trees upon the banks, and treat their sick in true monkey fashion. The colony by the canal, being overcrowded and as a consequence unhealthy, did and probably does still suffer from various unpleasant diseases. When one monkey is so obviously ill as to offend the feelings of the rest, a few of the larger monkeys watch it, and, taking a favorable opportunity, knock it into the canal. If it is not drowned at once, the sick monkey is pitched in again after it regains the trees, and either drowned or forced to keep aloof from the flock.

At the London Zoological Gardens the monkeys torment a sick one without mercy, and unless it is at once removed from the cage it has but little chance for recovery. The small monkeys bite and pinch it, the larger ones swing it around by its tail. When it dies, as many monkeys as can find room sit on its body.—*Spectator*.

Common Mistakes of Doctors.—

To promise a patient that you will cure him.

To promise to call at an exact specified time.

To promise that the malady will not return.

To promise that you can render more efficient service than your fellow-practitioner.

To promise that your pills are not bitter or the knife will not hurt.

To promise that the chill or fever will not rise so high to-morrow.

To allow your patient to dictate methods of treatment or remedies.

To allow yourself to be agitated by the criticisms or praises of the patient's friends.

To allow yourself to buoy up the patient when the case is hopeless.

To allow yourself to make a display of your instruments.

To allow yourself to experiment or exhibit your skill uncalled for.

To allow yourself by look or action in a consultation to show that you are displeased, and that if you had been called first matters would have been different.

To allow yourself to indulge in intoxicating beverages.

To allow yourself to rely wholly upon the subjective symptoms for your diagnosis.—*Ohio Medical Journal*.

The Lost Tail.—

Prof. Drummond thinks that the end of the vertebral column, consisting of three, four, and occasionally five vertebræ, called the coccyx, forms a true rudimentary tail. In the adult this is always concealed beneath the skin, but in the embryo, both in man and apes, in an early stage it is much longer than the limbs. What is decisive as to its true nature, however, is that even in the embryo of man the muscles for wagging the tail are still found. In the grown-up human being those muscles are represented by bands of fibrous tissue, but cases are known where the actual muscles persist through life. That a distinct external tail should not be still found in man may seem disappointing to the evolutionists, but the want of a tail augurs more for evolution than its presence would have done. It would have been contrary to the theory of descent had he possessed a longer tail, for all the anthropoids most allied to man have long since parted with theirs.

The Universal "Shot-gun" Elixir!—

That excellent serial, the Provincial Medical Journal, in commenting on the multiplication of fluid extracts and other preparations of animal glands and tissues, suggests that the modern therapeutists imitate Shakespeare's prescription, as given by the Witches in "Macbeth:"

> "Round about the cauldron go;
> In the poisoned entrails throw," etc.,

and in place of administering single remedies, use compound ones, placing in one cauldron, with due antiseptic precautions, the extracts of testicles, ovaries, brain-tissue, pancreas—all the *-ines* that modern medical atavism has imagined, so that we shall always be able to hit the mark, some one of the miraculous remedies going straight to the affected organ and rejuvenating it for a new life-work!—*Medical News*.

Forced Respiration in Asphyxia, Opium Poisoning, etc.—

The readers of the MEDICAL AGE will recall the paper published in our Sept. 25th, 1890, issue (p. 413) by Dr. Goodale regarding the method of forced respiration advocated by Dr. Geo. E. Fell, of Buffalo, N.Y. At the Pan-American Congress Dr. Fell declared he had saved twenty-eight lives by means of his apparatus (which he exhibited) when all hope had been lost. He believed Carlyle Harris's wife would have lived, beyond a shadow of a doubt, if this apparatus had been used, and it was a well known fact that Carlyle Harris had asked for it. A life had been saved in one instance when forced respiration had been necessary for twenty-two hours. The paper attracted much attention.

A New Symptom of Influenza.—

Shelly (Semaine Médicale, April 26, 1893) has observed a peculiar vesicular eruption on the soft palate in influenza, which he considers almost pathognomonic. The eruption consists of little vesicles, like sago grains, of from 0.5 to 1 mm. in diameter, and situated chiefly on the soft palate, though they may occur on other parts of the pharyngeo-buccal cavity. While these little vesicles may occur in other diseases than influenza, they are chiefly seen in this disease, and are an early symptom. Of forty-eight children observed with this eruption, forty-seven had other marked signs of influenza. On the other hand, of seventeen children in whom the symptom failed, only five were seized with influenza. — *The University Medical Magazine*, August, 1893.

Lay Pathology.—

The following, under the caption of "Snakes in the Blood," is a lay view of Filaria Sanguinis Hominis, as developed by the Washington Post of Sept. 8th last. We reproduce *verbatim*, as a medico-literary curiosity:

A discourse on the disease of which King Herod died entertained the doctors who gathered at the Section on General Medicine. It was read by Dr. G. Laussure, of Charleston, S. C. In the disease described little white snakes get into the blood and wriggle about until the patient dies. Several of these were exhibited. The doctors call the disease Filaris Hominis Sanquinis, and it occurs at the present time only rarely. The snakes, which are long, white substances, retire to the secluded organs of the body in the day when the subject is moving about, but come into the veins and arteries at night when he is sleeping.

The Latest Animal Extract.—

Alligatorine is the latest! The homœopathists have beaten us. They have made the toad and the fox yield "most valuable therapeutic products," and now the prepared fat of the alligator, "saponified by alcoholic potash, the soap decomposed by hydrochloric acid, and the fatty acid mixed with cotton-seed oil," is highly recommended. Has any glaring investigator prepared any extracts from the brain of our long-eared, four-footed friend, the ass? The balloonist and those afflicted with mountain sickness should get some extract of eagle's-wings, and surely mole's blood or flounder serum would at once cure caisson disease.—*Medical News.*

Epilepsy from Intra-nasal Disease.—

Dr. John Roe maintains that epilepsy frequently results from disease, obstructions, or malformation of the posterior nares and nasal passages. He relates a number of instances where the occurrence of epileptic attacks was entirely abated by removal of irritating growths and protuberances on the sensitive surface of the inner nasal area. "The frequency with which epilepsy has been found to result from intra-nasal disease emphasizes the importance of interrogating the nose in all cases of epilepsy, and especially in those where the cause is at all obscure."

The American Orthopædic Association.—

This Association, which held its session in St. Louis, Mo., from the 18th to the 21st of this month inclusive, adjourned to next meet in Washington, D. C., as a section of the American Society of Physicians and Surgeons.

The following officers were elected: Dr. A. M. Phelps, New York, President; Dr. H. A. Wilson, Philadelphia, and Dr. H. M. Sherman, San Francisco, Vice-Presidents; Dr. John Ridlon, Chicago, Secretary; and Dr. E. G. Brackett, Boston, Treasurer.

Dr. G. Sterling Ryerson, M. P. P.—

This gentleman, widely known as Surgeon of the Royal Grenadiers (Toronto), has been appointed by His Royal Highness the Prince of Wales, with the sanction of Her Majesty the Queen, an Honorary Associate of the Order of St. John of Jerusalem.

Dr. Ryerson is the first American or Canadian on the list, and is to be congratulated upon this well earned distinction. Among the prominent men who have been thus honored, we note Baron von Esmarch, Sir Henry Akland, Sir James Paget, and Surgeon Parke.

Eye Illumination from Behind.—

When an incandescent lamp is introduced into the mouth for the purpose of ascertaining, by trans-illumination, the condition of the maxillary antra, the pupils of the eye are seen as blood-red apertures. Mr. N. Stevenson calls attention to the curious fact that

when the light is thus introduced, as it were by a back door, the pupils *do not* contract. This observation may prove to possess considerable importance. — *Medical Press and Circular.*

Lady "Medics."—

There are at present 131 ladies registered as students at the seven French medical faculties. Of this number, ninety-five are Russians, twenty-five French, four Roumanians, two Bulgarians, two Servians, one German, one Turk, and one English. No one who has studied in Paris can avoid remarking the preponderance of the Muscovite element among these fair aspirants for medical honors.

The New Pharmacopœia.—

The new Pharmacopœia has been issued, and should be in the hands of every physician and pharmacist before the date at which it becomes official—Jan. 1, 1894. Pharmacists will find much to study, more perhaps to criticise. The Committee of Revision requests criticism and suggestion, which should be addressed to Dr. Chas. Rice, Bellevue Hospital, New York.

Obituary.—

Surgeon-Major Parke, well known in connection with Stanley's last African expedition, is dead.

The death of Dr. Graily Hewitt, whose name is known wherever obstetric medicine is taught, and who for many years was Professor of Midwifery in University College, London, is announced. His age was 65.

Ear-Rings and Ear Diseases.—

Dr. Max Thorner, of Cincinnati, declares he has encountered a number of cases of unsightly, disfiguring, and dangerous tumors of the auricle as the result of piercing the lobe and wearing ear-rings. He stigmatizes this fashionable folly as "a relic of barbarism that should be speedily abandoned."

"A Pretty Quarrel."—

We trust and are quite sure Messrs. Parke, Davis & Co. will come out victorious in their quarrel with the prince of quacks, W. A. Hammond, of Washington, D.C., and show up the "ox-brain" humbuggery in all its true nastiness.—*Medical Free Press.*

Therapeutic Brevities.

Esencia de Calisaya. — Since this preparation was first put upon the market by the Mosquera-Julia Food Co., it has grown rapidly in favor as a tonic, stomachic, and to a lesser extent as an anti-periodic. In the convalescent stage, there are few cases to which it is not applicable, especially if accompanied by anorexia, weakness, and physical and mental depression.

It is a well known fact, moreover, that the combined alkaloids of the cinchona bark are much more effective as a tonic than any one of the same taken singly. They are to be preferred, in many instances, as anti-periodic, particularly when the periodicity of the attack has been in some degree mitigated. It is for this reason that the East India Government now provides its officials with what is termed "Cinchona Febrifuge"—which is but a combination of cinchona alkaloids — in preference to quinine. While cases are frequently encountered where quinine is practically indispensable for a time, there are few which will not readily yield, and more satisfactorily, to a combination of cinchona alkaloids. Esencia de Calisaya and Cinchona Febrifuge are practically identical, save that the former is a fluid medicament, the latter a powder.

It is for the foregoing reasons, and to meet the demand of a large class of medical men, that Esencia de Calisaya has been put upon the market; recently, too, its scope has been increased somewhat, in that it is employed and highly recommended as a tonic in neurasthenia and other forms of disease that are the result of, or connected with, general physical and mental depression. *Apropos* of this, Dr. Wyatt Wingrave, Surgeon at the London Throat and Ear Hospital, remarks:

"I have great pleasure in expressing my appreciation of Esencia de Calisaya. It is an ideal 'Pick-me-up' and general tonic. It is slightly stimulant to the gastric mucous membrane, and is particularly useful in atonic dyspepsia. *In the alcohol habit, it satisfactorily neutralizes the craving for spirits*, and will be found of great service in treating this distressing disease."

Other physicians have expressed themselves in like manner, asserting that Esencia de Calisaya is a valuable adjunct in the treatment of the liquor habit. It is objected by some that the preparation is too sweet, while others assert the precise contrary. Such a fault, if fault it be, is individual, and consequently cannot be corrected in the process of

manufacture where a medicament is applicable to so large a class of diseases, and to so extensive a clientele as is thus provided.

Uses of Nitrites and Nitrates.—Dr. D. J. Leech, considering the bearing of the pharmacological action of nitrites on their therapeutic application, remarks there are three points worthy of note:

First: The minute quantity which may influence the vascular system and, as a consequence, certain functions of the body. An eighth of a grain of sodium nitrite, a small but uncertain fraction of a minim of ethyl nitrite, or $\frac{1}{160}$ grain of nitroglycerin, will, in many, distinctly affect the circulation.

Second: Notwithstanding their potency, even large quantities of the nitrites and nitroglycerin do not readily cause death. Although unpleasant and even alarming results have been known to follow the administration of comparatively small doses, there has been, so far as I know, only one case recorded in which a fatal result has been attributed to their medicinal use; this is the more worthy of notice, since these drugs have been commonly given in serious cases.

I do not know of an instance in which ethyl nitrite or sodium nitrite has proved fatal, though very large doses of the latter have been administered. Amyl nitrite has been taken by the dessertspoonful, yet recovery has, I believe, always occurred; and severe though the symptoms are which follow its inhalation, no harm has ever accrued from its employment, save in one instance, a case of phthisis, where death followed the inhalation of 7 drachms.

Considerable quantities of nitroglycerin have been taken with impunity, so far at least as concerns a fatal result; only in a few instances have very large amounts, taken accidentally or for suicidal purposes, caused death.

Third: It is important to bear in mind the evanescence of nitrite action. When nitrites advantageously alter functions, their direct influence for good usually soon ceases; on the other hand, their evil effects are also short-lived; there is no cumulative influence. The pharmacology of the nitrites and nitroglycerin indicates the class of cases in which these drugs will be of the most utility, namely, those in which the heart is embarrassed in its work owing to a want of due relationship between its power and the calibre of the vessels through which it transmits blood.—*The Lancet* (London).

Sprained Ankle.—A young lady with low quarter shoes jumped from a buggy and sprained the left ankle badly. Three hours later the swelling and pain were most severe, and, in spite of continuous hot-water fomentations, morphine had to be resorted to. The fomentations were persisted in until the third day, but with only moderate benefit. Then, with a roll of rubber adhesive plaster one inch wide, I strapped the limb. The first strip began at the inner side of the heel, crossed the foot obliquely, and ended under the foot at the base of the little toe; the next strip began at the outer side of the heel, crossed the foot and other strap, and ended at the base of the big toe under the foot. Then each additional strap overlapped about one-fourth inch the previous one, until the whole foot, ankle and lower part of the leg were completely enveloped. A cheese-cloth bandage was applied over the whole to make the plaster adhere more closely, and prevent the stocking from sticking. I then had a stocking put on, and an old shoe well laced up, and told her to get up and walk. Ten minutes before, the patient could not move the foot without screaming, but now she walked across the room and back without even limping. I then told her to dress and go where she wanted to. On the fifth day after the injury the sprain gave her no more trouble. I told her to wear the straps for three weeks, and then remove two every day until all were off. So this treatment was entirely successful and satisfactory.—Dr. W. K. Gatewood in *Virginia Medical Monthly.*

Ingrowiug Toe-nails.—Dr. John A. Batton, in the Philadelphia Polyclinic, suggests that "ingrowing toe-nail" is simply a mass of granulation tissue springing from a sore at the margin of the nail, the nail itself being in its normal position.

Dust over the granulations at the bottom of the sulcus with aristol or iodoform, and on top of this put a small piece of lint or cotton. Take a piece of rubber bandage one-half inch wide and twelve to fourteen inches long, and, if it is the inside of the toe that is affected, carry the bandage over the nail toward the inflamed structure. This, as you will observe, will have a tendency to carry this mass away from the nail. Beginning at the extreme end of the toe, carry the bandage back, with such pressure as the patient can comfortably stand, until the whole area of inflammation is included. Fasten it by means of a light gum band or tapes fastened to the end of the bandage. The patient is then able to wear his shoe and attend to his ordinary duties. The bandage can be removed at night and reapplied by the patient, if desirable, the first thing in the morning.

In a few days the mass will have disappeared, and a complete cure can be effected in a brief period.

Prevention of Cocaine Poisoning.—Patients should be prepared by giving them a drop of a 1-per-cent. alcoholic solution of nitroglycerin a minute before administering the cocaine, repeating the dose at intervals if the pulse be not affected and no pain or fullness in the temporal region be felt. The nitroglycerin acts almost as rapidly as amyl nitrite, and continues to affect the vasodilators for upward of half an hour longer than the latter, which Prof. Lepine proposed, but which, on account of its fleeting action, has failed to gratify the hopes to which it gave rise. Prof. Lepine points out the importance of paying attention to the type of patient. The nervous are to be encouraged and calmed, the anæmic made to lie down before administering the drug, for thus cerebral anæmia is avoided. Dr. Lepine's statistics show that in the neighborhood of the face it is unsafe to inject hypodermatically more than two centigrammes (⅓ grain) at a time, and not more than four or five centigrammes should be allowed to come in contact with a mucous surface. By taking these precautions, accident is guarded against. —*Quarterly Journal of Inebriety.*

Tobacco and Cholera-Germs.—It has often been asserted that the devotees of tobacco are remarkably exempt from cholera. After repeated experiments to ascertain the truth of these claims, the Hygienic Institute of the University of Berlin publishes the following conclusions:

Bacilli of cholera die through drying up on dried tobacco leaves even quicker than by drying up on glass, and in this condition they die in an hour on the average.

On moist tobacco leaves the bacilli do not increase, and are killed after a short time.

The bacilli were not proved to exist in the samples of cigars manufactured in Hamburg during the prevalence of the epidemic.

Through the fermenting and drying processes which cigars must undergo before they are ready for shipment, the bacilli are killed after a short time, even when packed, by way of experiment, in the linen bands about the cigars.

Tobacco smoke checks the development of cholera bacilli, and is quickly fatal.

Caffeine and Alcoholism.—Dr. Czarkowski (Medical Bulletin) considers alcoholism a contra-indication of caffeine. In one case a patient afflicted with mitral insufficiency and œdema, manifested mental agitation and exhilaration after having ingested 30 grains of caffeine citrate in the course of twenty-four hours. When the effect of the caffeine ceased, the patient became sad, and did not retain any recollection of his state of agitation. In another case (with kidney disease), there was noticed, after the fifth dose of 3 grains of the same salt, marked excitement and fright, followed by a loss of consciousness for several hours. In a third patient (afflicted with typhus), a few doses of caffeine, 9 grains, produced furious delirium, which the patient did not remember afterwards. He concludes that in an alcoholic patient the use of caffeine requires much caution; that it should always be commenced with small doses; and the attendants should discontinue the alkaloid at the least sign of agitation.

Cocaine in Smallpox.—Dr. Samayoa, of Guatemala, after using this alkaloid in several cases of smallpox, states his results as follows:

Cocaine given continuously from the beginning can completely abort the disease.

If given after the eruption has appeared, it will transform confluent or hæmorrhagic into discrete forms.

Sometimes when the cocaine is given from the beginning of the disease, the eruption assumes a *corneal aspect* and the pustules fall very soon.

Cocaine prevents suppuration, hence there is no secondary fever, and no marks remain on the skin.

To obtain these results it is necessary to give cocaine as soon as the initial symptoms appear, *and it must be continued without interruption.*

The best preparation is the hydrochlorate, and should be continued five or six days or even nine if necessary.—*La Escuela de Medicina.*

Ear Cough.—Mrs. L—— consulted me in June, 1886, for deafness of the right ear. I observed also that she suffered from a harsh, rasping cough of a year's duration. I found the auditory canal filled with what seemed to be inspissated cerumen, which I removed. Her deafness was relieved; the cough ceased immediately, and has never returned. In all cases of intractable cough of unknown origin, to which is applied the appellation "irritable cough," the auditory canal should be examined. Most individuals suffering from ear cough are or have been neurasthenics; but as in reflex affections of other

organs, where the cause seems skeptically slight, so in this affection we must give due attention to the reflexes of aural origin. The exciting cause in all cases coming under my observation has been pressure causing irritation.—A. G. Aldrich, M.D., in *Ophthalmic Record.*

Bone-Filling.—Dr. Oscar J. Mayer, of San Francisco, advocates bone-filling to obliterate cavities resulting from osteomyelitis and bone tuberculosis, where formerly amputation was necessary. The materials used are chiefly copper amalgam and cements, the former being shown by bacteriological experiments to be possessed of strong antiseptic properties and able to destroy the germs of tuberculosis and osteomyelitis. Experiments have been made on dogs, and prove that foreign bodies can become transformed into bone substance.

On account of the antiseptic effects of copper amalgam, special instruments are demanded for the application of the filling. The same amalgam is also applicable in certain ways to the treatment of chronic gonorrhœa, diphtheria, and other infectious diseases.

Mosquera's Beef Meal.—At Leipsic-Plagiitz, Mosquera's Beef Meal has been given a trial in the Fourteenth District School, which every morning furnishes needy scholars a plate of soup and a piece of bread. Under the supervision of the teachers and the physician of the school, Dr. M. Goëtz, a soup was made from Mosquera's Beef Meal in the proportion of 250 grammes to 50 liters for 130 boys, and 350 grammes to 70 liters for 164 girls. As Beef Meal is sold to hospitals and public charities at the rate of 7.15 marks per kilo, the feeding of 294 children cost per head only about six pfennings (1¼ cents) inclusive of 2.50 grammes of butter and 30 grammes of grits and salt. The experiment was extremely satisfactory, and the constant use of Mosquera's Beef Meal for the feeding of the scholars of charitable schools decided upon.—*Reichs-Medicinal Anzeiger.*

Camphoric Acid in the Night Sweats of Phthisis.—Howard (Maryland Medical Journal, Feb. 18, 1893) has employed camphoric acid in combating sweating in a number of cases of phthisis. He administered the drug at first in daily doses of 20 grains, and subsequently in doses of 10 grains every two or three days. The results were excellent. Unlike belladonna, the drug led to no disagreeable after-effects. In one case of acute rheumatism camphoric acid completely controlled the profuse sweating.—*University Medical Magazine*, August, 1893.

Cinnamon as an Antiseptic.—"No living germ of disease can resist the antiseptic power of essence of cinnamon for more than a few hours," is the conclusion announced by M. Chamberland as a result of prolonged research and experiment. It is said to destroy microbes as effectively, if not as rapidly, as corrosive sublimate. Even the scent of it is fatal to microbes, and M. Chamberland says a decoction of cinnamon should be taken freely by persons living in places affected by typhoid or cholera.

Incontinence of Urine in Small Children.—Dr. Powers counsels the following procedure—which, of course, is applicable only to male children. He seals the preputial orifice with collodion, at the moment of retiring. If only a small amount is passed, the prepuce will be found slightly distended in the morning. If the desire to urinate wakens the child, he can easily remove the film himself. By this method he has rapidly obtained, sometimes in fifteen days, complete suppression of the incontinence.—*Journal of Cutaneous and Genito-Urinary Diseases.*

Boiled vs. Unboiled Milk.—Dr. Fayel, of Caen, France, publishes a blast against the use of boiled milk, which, he says, is more or less indigestible and in no respect safer than unboiled milk. He bases his opinion upon investigations that prove the temperature at which milk boils is insufficient to destroy microbes, and that it is, therefore, not sterilized, while its density is increased by the boiling above that which is suitable for infant digestion.

Cascara Sagrada as a Tæniafuge.—An English physician reports having met with considerable success in the treatment of tapeworm by cascara sagrada. He prescribes as follows:

Ext. cascar. sagrad. fld., ʒ vj.
Syrup. aurantii, ʒ iij.

Sig.: A teaspoonful three times daily, for an adult.

Whooping-Cough.—Dr. Nageli asserts that a paroxysm of pertussis may be aborted by drawing the lower jaw downwards and forwards; and that the course of the disease is favorably affected by suppressing the attacks. Spasmodic cough due to other causes may be similarly restrained.—*Dublin Journal of Medical Sciences.*

Medical Progress.

Diseases of the Kidneys in Inebriety. —Dr Wood, in a recent clinical lecture, gives a very clear explanation of the physiology and pathology of many confusing cases that come under asylum treatment—cases of inebriety with a history from the family physician of what is termed incipient Bright's disease. When examined, albumin and casts are found in the urine. The removal of spirits, and the improved health of the person, is always followed by the disappearance of albumin and casts. Excessive eating may give rise to a temporary reappearance of albumin. Some of these cases come with a history of Bright's disease in advanced stages, and unexpectedly recover. Cases who apply for life insurance are rejected for this reason, and later, when abstaining from spirits and living a hygienic life, are accepted as good risks. These cases are not clear, and are always attributed to the irritation of alcohol in the system.

Dr. Wood relates three cases in which there seemed to be evidence of chronic disease, but which proved amenable to treatment. He says: "In Mr. R. the urine contained casts and albumin and oxalate of lime, but under nitromuriatic acid and Turkish baths all these symptoms disappeared."

In Mrs. C. and Mrs. S. the urine became loaded with albumin, casts, and uric acid, which disappeared under treatment. The abundance of casts and albumin was followed by excess of uric acid. He believed that the oxalates and lithates were simply irritant poisons, which, acting on the kidneys, already predisposed by original constitution or long irritation to take on degenerative lesions, produced what may be called acute exacerbations of a chronic form of Bright's disease.

The first fact made prominent in Dr. Wood's lecture was that arsenic, alcohol, lead, and various poisons, when taken into the system, are capable of producing not only renal symptoms which we recognize as those of acute Bright's disease, but a condition of renal irritation which resembles chronic diseases of the kidneys, and cannot be distinguished from fully-formed disease.

The second fact is that poisons formed in the body are capable of acting on the kidneys precisely in the same manner as do poisons which come from without; and that lithic acid, oxalic acid, and probably ptomaines and other organic substances originating in the human system may produce not only albumin, but also tube casts.

He believes that cases of contracted kidneys, whose nature we only recognize when the mischief has become chronic, are often the result of a debauch, perhaps the outcome of an oxaluria or lithuria, or the work of a poison from without the body. As a result, there has been a series of renal irritations and paroxysms of subacute albuminuria, each one passing away, leaving behind a minute scar on the structure of the kidney, these scars accumulating until the whole structure has been destroyed.

A person having pulmonic catarrh gives out the signal note of danger in a frequent cough, which is an alarm bell that rouses greater care and caution. In the catarrh of the kidneys no sound gives any indications of the danger. When the organ is wrecked, then we wonder that the danger was not discovered before.

Worry may cause Bright's disease through derangement of digestion, the impaired primary and secondary assimilations leading to the development of organic poisons, which must be eliminated through the kidneys. Paroxysms of hysteria and emotional and nerve storms can so affect the nutrition of the kidneys as to lead to the same trouble.

The great lesson this should teach is the necessity of persistent treatment of persons who have a predisposition to diseases the result of which is to produce poisons that are irritating to the kidneys; heavy eating of nitrogenous food, and the use of any substances that provoke albumin, are to be studied and guarded against.

In the treatment the stimulation of the skin as an excreting gland is a great essential. Powerful sudorific measures, increasing the activity of the sweat glands, relieve the kidneys. The Turkish bath often is the best means for this purpose. Persons who over-eat must stop, or make up for this by excessive exercise. Exercise must be continued, or its good effects will be lost.

These views are fully sustained by clinical experience with inebriates. The gravest symptoms of organic lesions of kidneys, liver, and heart are often relieved, and sometimes permanently, by baths, diet, and daily exercise. The use of alcohol is always followed by derangements of digestion and poisonous formations, which depend on the kidneys for elimination. The Turkish bath seems to give the most pronounced benefit for this condition.

Milk and Lime-Water in Disease.—Some time since, in my miscellaneous readings, my attention was directed to the beneficial use of milk and lime-water in the treatment of certain diseases, more especially those of

nervous origin. There are many persons who are naturally fond of good milk and bread, and regard it as almost a luxury, who hesitate to use it for the reason that the milk will not digest readily, sourness of stomach ensuing; but experience teaches that lime-water and milk are not only food and medicine at an early age of life, but also at a later period. When, as in the case of infants, the functions of digestion and assimilation are weak and easily perverted, the stomach irritated by improper food, inflamed by the use of strong drink, enfeebled by disease, or otherwise unfitted for its duties, as is shown by the various symptoms attendant upon indigestion, such as dyspepsia, diarrhœa, dysentery and fever—such a stomach will resume its work, and do it energetically too, on an exclusive diet of bread, milk, and lime-water. A goblet of cow's milk may have four tablespoonfuls of lime-water added to it with good effect. The way to make lime-water is very simple: Procure a few lumps of unslacked lime; put the lime into a stone jar, then add water until the lime is slacked and about the consistence of thin cream; the lime settles, leaving the pure lime-water on the top. I find milk and lime-water simply unsurpassed in nervous disorders, more especially in female disorders and those of children. We must, in this class of diseased action, give more attention to the functions of digestion and assimilation, and not let our attention be too much engrossed by one or more prominent symptoms in parts remote from the primary source of morbid action. I have followed closely in the footsteps of one of New York's leading physicians in this line in the treatment of this class of disease. Dr. Chapman states that, having used, the last few years, milk with lime-water almost exclusively as the diet of his patients, he has attained success unknown to him when he depended more on medicine and less on food. My experience and success fully justifies and corroborates Dr. Chapman's statement. The Doctor says that milk with lime-water may almost always with advantage be made the prime article of diet in the sick-room. It is the most digestible as well as the most nourishing food that can be given; it allays gastric and intestinal irritability, offers a duly prepared chyle to the absorbents, supplies the blood with all the elements of nutrition, institutes healthful tissue changes, stimulates the secreting and excreting glands, provides nature with material to sustain herself in contest with disordered action. If it be conceded that nature always accomplishes the cure whenever it is secured, and that drugs merely aid, direct or modify her efforts to this end, it then becomes self-evident that the food which supplies the vital forces with all the powers of resistance they possess is a matter of first importance; and that milk, acted upon by lime, provided that it contains all the essential properties of other articles epitomized, and is more friendly than any or all of them, has a range of application almost as extensive as the disease itself, whatever its character and whoever the patient. I think the use of milk is one of the most potent factors in treating Bright's disease. To secure the best results Dr. Weir Mitchell's mode of administration is perhaps the best. The milk used is thoroughly skimmed and freed from butter, the patient restricts himself absolutely to milk, and continues treatment for a long time. If it disagrees with the stomach, Dr. Mitchell advises the patient to be put to bed and the treatment commenced with tablespoonful doses, to which lime-water is added, until the stomach tolerates the milk, when from eight to ten pints daily should be taken. —W. K. Grayson, M.D., in *Texas Sanitarian.*

Inoculation for the Cure of Cancer and Sarcoma.—Considerable has been written regarding the value of inoculation of erysipelas for the cure of sarcoma and cancer, and some very striking instances of improvement or cure have been reported. The whole subject has been reviewed, and an important contribution from his own experience made, by Dr. William B. Coley (American Journal of the Medical Sciences, May, 1893). This surgeon gives details of ten cases of his own, and collects other cases to the number, altogether, of thirty-eight.

Of these 38 cases the erysipelas occurred accidentally in 23 cases, and was the result of inoculation in 15 cases; 17 cases were carcinoma, 17 cases were sarcoma, 4 either sarcoma or carcinoma.

The immediate and final results were as follows:

Of the 17 cases of carcinoma, 3 were permanently cured. In addition, 1 case of probable carcinoma (Hutchinson's) was well five years after the attack of erysipelas. Of the remaining 13, 10 showed improvement which, although temporary, undoubtedly added to the life of the patient in most cases. One case (Janike's) died, as a result of the erysipelas, on the fourth day.

As regards sarcoma, we find the curative action of the erysipelas even more marked. Of the 17 cases of sarcoma we find 7, or 41 per cent., well and free from recurrence from one to seven years after the attack of erysipelas.

All the cases except those of Dr. Coley

were treated by injections of erysipelatous fluid. Dr. Coley used pure cultures of the streptococcus. Repeated injections were made, and it seems to be necessary to continue the inoculations in order to avoid recurrence. The theory that whatever good has resulted was due to the local reaction, is considered to be disproved by the fact that inoculations made at a distance from the tumor have been known to cause it to disappear (Spronck).

So far as the danger is concerned, it appears that among forty-four inoculations death occurred twice.

Dr. Coley states in a note that of late he has been using a preparation of the toxic principles of erysipelas in four cases of inoperable sarcoma. The injections have been made into the tumor itself, and repeated every forty-eight hours. The reaction has been almost identical in character with that produced by true erysipelas, though milder in degree, and it has always passed away within twenty-four to forty-eight hours. The temperature has never risen above 103½° F., and has usually dropped to normal the following day. He had also frequently made use of the toxic products of the bacillus prodigiosus in combination with the products of the erysipelas coccus, to intensify the action of the latter, and always with the desired effect. He concludes that: (1) The curative effect of erysipelas upon malignant tumors is an established fact. (2) The action upon sarcoma is more powerful than upon carcinoma in about the ratio of 3 to 1. (3) The treatment of inoperable malignant tumors by repeated inoculations of erysipelas is both practicable and not attended with great risk. (4) The curative action is systemic, and probably due chiefly to the toxic products of the streptococcus, which products may be isolated and used without producing erysipelas. (5) This method should not be employed indiscriminately until further experiments have proved its limitations.

Dr. Coley's paper will undoubtedly give a great impetus to the culture of streptococci, and we hope soon to see the question of their therapeutical value firmly settled.—*New York Medical Record*, August 5, 1893.

THE THERAPEUTIC VALUE OF ALCOHOL IN PNEUMONIA.—At the Société de Thérapeutique, session of May 24, 1893, the subject of the therapeutic value of alcohol in pneumonia was again discussed. While the necessity of alcohol in the asthenic forms was admitted by all, the general sentiment of the authorities present was in favor of giving alcohol, as such, in its purity, sufficiently diluted. The old notion that old wines, whiskeys, etc., were to be preferred because of the "mellowing" properties conferred by age, was condemned as a delusion. Such liquors were declared to be much more irritant to the stomach and less certain in their general supporting effects than pure ethyl alcohol deprived of aroma.

One eminent speaker commended the alcohol of rice, as being exceptionally free from fusel oil and other impurities.

We are told that the best French cognac is, "with few exceptions," "nothing but the alcohol of beets, of poor molasses, changed and colored by the fabricator by the addition of infusion of tea and various essences which give it bouquet." Such brandies are almost certain to contain methyl alcohol in quantity—certain, when freely administered, to do harm to the patient.

M. Huchard, who is an enthusiastic advocate of the employment of digitalis in the pneumonia of influenza, thinks alcohol the remedy *par excellence* for pneumonia by reason of its "dynamogenous action." There was much speculation as to how alcohol does good. M. Bovet declared somewhat vaguely that "by its dynamogenous action it supports the patient; by its reducing action it modifies the elements of the blood, which, rendered more fluid, undergoes an osmotic acceleration which expresses itself by the progressive decongestion of the pulmonary parenchyma." He also thought that "by its calorigenous reaction it develops a considerable number of calories which cannot but have an influence on the evolution of the infectious elements, by this fact impeded in their toxic action, and possibly destroyed." "What tends to prove this," he says, "is that after the absorption of the alcohol, we find in the extractive matters of pneumonia patients an abnormal proportion of waste matters of the creatinic series, which are known to be endowed with a remarkable toxicity."

But apart from such speculations, the best proof of the value of alcohol in pneumonia was affirmed to be clinical experience.

The combination of pure ethyl alcohol with digitalis constitutes, in the estimation of Huchard, the ideal treatment of pneumonia, when any active treatment is needed. He gives the digitalis in the form of its active principle, the crystallized digitalin, in the daily dose of 1 milligramme by mouth.

It is a little singular that no allusion was made at this meeting to the therapeutic efficacy of strychnia in acute croupous pnemonia, a drug which is coming more and more into favor generally as a cardiac tonic in this disease.—*Boston Medical and Surgical Journal*, July 27, 1893.

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Original Articles.

THE PROFESSION, THE PUBLIC, AND THE CODE.*

BY ERNEST HART, D.C.L.†

Sir Astley Cooper, one of the greatest surgeons and most accomplished gentlemen of the last generation, was in the habit of addressing every candidate for membership of the Royal College of Surgeons of England, of which he was president, somewhat in the following words: "Gentlemen, you are about to enter on a noble and difficult profession; your success in it depends on three things: first, on a good and thorough knowledge of your profession; second, on an industrious discharge of its duties; and third, on the preservation of your moral character. Without the first—knowledge—no one can wish you to succeed; without the second—industry—you cannot succeed; and without the third, even if you do succeed, success can bring you no happiness." Those words might form a very adequate summary text for guidance of the conduct of all medical men. And it might conceivably be asked whether there is any necessity for a more detailed and elaborate code. Indeed, it practically has been asked, and there are large questions involved in the decision. On the other hand, it has, from time to time, lately, in our country been found necessary to reinforce and strengthen our code by additional declarations, and I think to some extent in yours; the need for a stringent upholding and development of the code has also become a question of the day. I think it is clear that if ever there were such necessity, at no time could it be stronger than at the present moment. For under the stress of the modern social development, under pressure of the modern temptation for advertising and the severity of competition, in view of the arts of those who make advertisement a business and a profit; in presence of the temptations held out to draw medical men from the ancient paths of modesty and self-effacement, there is now stronger reason than ever to fortify ourselves against those growing and innumerable seductions by a code so exact, so far-reaching, that the physician need never be in doubt as to what is his duty in any complication, or in the face of any doubtful case in which he may be inclined to give himself the benefit of the doubt.

But, first of all, I want to elaborate the view that our rules of medical etiquette stand upon a logical and strong basis, and that their strict enforcement is for the benefit of the public, at least as much as, if not even more than, for the benefit of the profession. Medical etiquette has been sneered at by shallow cynicism as mere trades-unionism. It is, on the contrary, a self-denying code, which is made in the interests of pure morality, and for the benefit of the public far more than for the interests of the profession. This allegation of trades unionism is the converse of that of inutility, which those who are prone to call themselves of the younger school allege; but not even the youngest of us, as you know, are infallible, and in this matter it is the youngest who are most likely to go wrong. They proclaim themselves liberals. Is it, however, in some cases the liberalism of Gallio? Let us look at this matter from the largest and most liberal standpoint. Let us begin by comparing our code with the standards of the legal profession.

My distinguished friend, Sir Edward Clarke, lately the Solicitor-General of England, in writing to me on the subject, recently said the essence of the matter might be summed up in a very few words: "Every

*An address delivered by invitation before the third general meeting of the Pan-American Medical Congress, Washington, Sept. 7, 1893.

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lawyer ought to be a gentleman, and ought to do only what is right and honest; if he does not, other men ought to have nothing to do with him." Notice that "if he does not, other men should have nothing to do with him." That position of the bar is strengthened by this, that the etiquette of the bar is absolutely in the hands of the bar circuits and attorney-general, and that of the solicitors in the hands of the Incorporated Law Society; so that any solicitor who is guilty of an offense, whether as a lawyer or as a gentleman, can be, and from time to time is, not only temporarily suspended, but deprived of the right to practice at all. In a case tried last July in England, a solicitor in a certain town had been the proprietor of a house used for an immoral purpose, of which he received the rent. That was considered a stain upon his character as a gentleman, and for that he was suspended from the roll and excluded from practice. So that we have at least the example of the legal profession, who have a code even stricter than ours, in insisting upon a high standard of honorable conduct in the profession.

Legal etiquette prescribes certain technical acts which a lawyer must not do. An eminent American lawyer, whom I had the pleasure of meeting, mentioned to me, for example, that he may not conduct a "speculative suit;" that is, he may not conduct a suit in which his pay is to depend on the success of the suit—a palpable restriction on his liberty. Liberty is a blessed word, but compulsion is, under certain circumstances, often a more blessed word. The reason for this rule is that if a lawyer undertakes such a suit he becomes personally and financially interested in the result, and may be tempted not to give the court all the aid which is his duty, or may in the end lose the relations of harmony and respect which are indispensable between the court and the lawyers, who are officers of the court and are bound to help Justice to duly balance its scale.

In the same way "champerty" is a legal offense. So, too, no respectable lawyer will give separate advice upon a case which is already in the hands of a colleague. As between advocate and advocate, harmony, courtesy, and the forms of friendship must prevail; and at any time they must in the interest of the client be able to come together and to seize the earliest opportunity of avoiding litigation by compromise or mutual settlement, where it is possible and right. The etiquette of the bar is very strict, and is closely observed.

Legal etiquette is, like medical etiquette, a code of honor and of duty by which the public benefit; and those who depart from it or deride it—"legal shysters" I think they are called in the United States—are not, any more than medical quacks, those of whom their country or their profession have most reason to be proud.

I will pass at once to the consideration of our code of medical etiquette. I will ask you to consider whether you are of the opinion that it is safe or wise to cast aside the precedents of past experience and to substitute individual judgment for settled rules. If man were a purely abstract and perfectly moral intelligence, no doubt few words would suffice to legislate for his daily needs. Enough to say, "Do unto others as ye would they should do unto you."

But medical men are not pure creatures of perfect and abstract morality any more than other men. They have, indeed, certain advantages from the outset. From the very beginning of their professional life it is impressed upon them, by their teachers, that their profession is *a mission and not a trade;* a mission involving frequent self-sacrifice and a steadfast regard for interests other than their own. In this they are greatly helped by the force of precedent, and by the example of those around them and of the leaders whom they most respect. But even these are inadequate. Without the aid of the written as of the unwritten law, even the best of men are apt to decide *wrongly in their own favor,* on a doubtful question of ethics, and often in matters and cases where there are settled instructions in the code which would guide them rightly.

Let me read to you a few of the rules of our College of Physicians, which command with us a universal adhesion and respect. I do so only as an example of the conclusions to which many years of observation of the impingement of the forces of modern life on professiocal duty have led some of our wisest heads. I will refer only to a few, as follows:

"No candidate shall be admitted to examination who refuses to make known, when so required by the president and censors, the nature and composition of any remedy he uses."

"That the practice of medical authors frequently advertising their own works in the non-medical journals, and especially with the addition of laudatory extracts from reviews, is not only derogatory to the authors themselves, but is also injurious to the higher interests of the profession."

Again, "No fellow, member, or licentiate of the college shall officiously, or under color of a benevolent purpose, offer medical aid to, or prescribe for, any patient whom he knows to be under the care of another doctor."

A further rule prescribes that no physician shall himself assume any special designation of therapeutic method, such as homœopath, electropath, hydropath, or countenance those who do so.

Again, "A physician shall have no interest in a secret medicine, and that he shall always when called upon by the college disclose every part of the composition of his medicines."

"If it shall at any time hereafter appear or be made known to the president or censors that any fellow or member of the college has obtained admission into the college, or that any licentiate of the college has obtained the license of the college, by fraud, false statement, or imposition, or that any fellow, member, or licentiate has been guilty of any great crime or public immorality, *or has acted in any respect in a dishonorable or unprofessional manner*, or has violated any statute, by-law, or regulation of the college relating to fellows, members, or licentiates, as the case may be, the president and censors may call the fellow, member, or licentiate so offending before them, and, having investigated the case, may admonish or reprimand, or inflict a fine; or if they deem the case of sufficient importance, may report the case to the college, and thereupon a majority of two-thirds may declare such fellow or member or licentiate to be no longer a fellow, member, or licentiate, as the case may be, and his name shall be expunged."

Let us consider now those restrictions which operate to forbid a medical practitioner to consult with "homœopaths," and of which the wisdom has been by some disputed. We do not believe, and we cannot appreciate the medical capacity or fitness to undertake the treatment of disease of those who hold, that drugs which given internally will produce certain symptoms of disease are the appropriate remedies for those maladies. For instance, medicines which produce skin reddening for erysipelas; leucorrhine for leucorrhœa; syphiline for syphilis. We do not agree that all chronic maladies arise from syphilis, sycosis, or itch, and that medicines act with an intensity proportionate to the infinite diminution of the dose; or that there is any utility in prescribing, in accordance with these principles, say a decillionth of a grain, when we all know that a dose so small, if taken by every being on the globe once a minute, would not finish the grain in thousands of years. Nor, again, do we believe that the activity of medicine increases in the ratio of the number of shakes given to the vessel containing it. We hold that we have nothing in common with those who assume to base their practice and theory on this kind of therapeutics. Being well assured that these methods and this theory are absolutely delusive, the negation of reason and the acme of folly, it would be useless, deceptive, and contrary to good faith and the public interest that we should pretend to consult with those who profess them and who take a designation derived from them, and to cover with the respectability of logical science what they are pleased to term their system of treatment—faith-curing, it may be, but in that too we can take no part under false pretenses.

But then it is said, What if the physician or surgeon of good standing is only called in by the homœopath to assist in diagnosing the nature, the stage, the complications, or name of the disease? Ought he not to give this help for the patient's sake? The answer is: The physician is a healer, not a reader of riddles nor a conner of conundrums. He is there not to give a name to symptoms or pathological conditions, but to heal the patient; and if he knows that his solution of the riddle is not to be followed by a method of treatment which he considers capable of attaining that result, he would be infamously wrong, and he is always wrong when he gives

the cover of his accepted position, of his recognized ability, and of his professional sanction, to what becomes under such circumstances a dangerous farce or a deliberate fraud. The riddle is read, but the patient is none the better.

But it is said, May a regular medical practitioner not be called in to perform a difficult surgical operation? If a surgical operation meant only cutting, sawing, and sewing, it would be a plausible excuse for the surgeon accepting the responsibility of acting as sawbones to a quack. But there is no surgical operation which does not in its preliminary stages, and may not in its various phases and sequels, require concomitant medical consideration and treatment, or in which septic, constitutional, or accidental complications may not arise. The surgeon cannot honorably, in the interest of his client, divest himself of the responsibility for the wise and faithful treatment of these as an essential part of his operative interference.

I have used the word quack. It is a word often used now in too restricted a sense. This is Dr. Johnson's definition of a quack: "A boasted pretender to arts which he does not understand; a vain, boasting pretender to physic, one who proclaims his own medical abilities in public places; an artful, tricking practitioner in physics." This strikes at the root of the matter, now as then. Observe, here is no distinction between those who have degrees and those who have not. The great lexicographer makes no distinction; neither do I.

The essential note of the quack is love of advertisement. The public "places" of Dr. Johnson's time were the coffee-houses; they are now the newspapers. Now what are the ways in which the diplomaed quacks adopt the method and become the imitators, the rivals, the accomplices of the undiplomaed? You may know them by their works. They are the gentlemen who put themselves forward to be interviewed, and are the sham Jupiters and willing Mercuries of the newspaper world. They confide to the ubiquitous reporter what is their opinion of the last new bacillus, the last new anti-toxine, or invite reporters to their amphitheatre and hospital ward. All this is only an outcome of the venal desire for advertisement. They are the gentlemen who, if they have the good fortune to attend a prize fighter or a ballet girl, or the ruler of a State, are not slow to disclose the secrets of the sick-room, and all for the public good.

Now in the venerated Oath of Hippocrates, which is the foundation of our code of to-day, the disciple swears to impart the knowledge of his art to others according to the law of medicine, and to share with his colleagues by precept and every other mode of instruction all that he knows. He further binds himself that he will have *no medical secret*, that he will practice his art and pass his life with purity and holiness, that he will abstain from every voluntary act of mischief and corruption, and that *whatever in connection with his professional practice* he sees or hears in the life of men which ought not to be spoken of abroad he will not divulge. "While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art respected by all men and in all times. But should I violate this oath, may the reverse be my lot."

This is the spirit of the modern British code, and I know well it is yours also.

We have dwelt as long as time will allow on the considerations of public utility and professional duty which oppose consultations with homœopaths and their congeners; nor can I stay long to discuss the prohibition of open advertisements—the advertisements in the lay press, of medical books intended for the profession; the submitting of technical books to review; the public criticism of the treatment of any disease or person; the thousand and one acts, in fact, by which the advertising surgeon-physician seeks to gain the ear and favor of the public by means of notoriety or self-proclamation in place of hard honest work, real professional worth, and the judgment of those whose knowledge makes them alone competent to judge. Self-advertisement is the note of the quack. It is as dangerous to the public as hateful to the profession; for it misleads the masses by substituting easily purchased notoriety for merit, and covering by loud talk and bombast and plausible pretenses the emptiness of the shallow pretender. It covers also with a pseudo-respectability the venal corruption by which whole columns and pages of read-

ing matter of the newspaper are very frequently devoted to quack nostrums and "treatments"—save the mark—often of the most fantastic, false, and dangerous character. It destroys the landmarks of honor and reticence, when in successive numbers of the daily and weekly papers are found the lucubrations of these pests of society, and, alongside of them, the interviews, the explanations, and the descriptive narratives put forth for the public good by reputable physicians, *apropos des bottes*, but hardly-veiled self-advertisement.

It is, however, only fair that the physician should have notice of the offense or its penalties, and that this salve which he puts to his conscience should be rubbed off. Hence the value of "A Code." We have seen that the medical man is prohibited from deriving any profit directly or indirectly from any medicine which he uses or recommends, and from tampering, however remotely, with secret medicines. If this were merely an arbitrary rule, if it were not at least as much for the benefit of the public as for the practitioner, there might be ground for calling it in question. But it is a rule of the highest public import.

That a healer, whose judgment in prescribing should be clear and unbiased, should possess and profit by a secret remedy, is as obvious a source of public peril as it is a heinous offense against professional morality. Every physician has a traditional and immemorial right to expect from, and he is bound to give to, his fellow-practitioners every possible aid and assistance in the treatment of disease and in the healing of the sick. He has received such knowledge from his predecessors; he daily and continually receives it from his colleagues and contemporaries, to whose knowledge and experience, and from the results of whose investigations (openly stated and submitted to critical discussion), he owes the great bulk of his knowledge and of his ability to practice at all.

A new method of treatment, a new drug, or a new dogma in medicine is like a new doctrine or a dogma in theology. The one is as much a means of physical salvation as the other is of spiritual salvation. The man who keeps either of them to himself, as a profitable secret for his own mean gain, is a traitor to his profession; he is also a traitor to humanity, and he is false to his mission. It is fitting that the code should provide for such cases, and that the penal clause should not remain a dead letter.

But it is sometimes suggested that the usefulness of the "secret" drug may be so great as to overpower and outweigh morality, and call for its prescription. I put it to you all, is there any foundation for such an assumption in the whole history of medicine? In the whole history of the past can we recall any example of a secret medicine which had aught but the most insignificant value, or could not easily be replaced? We may take even the most famous, such as the famous remedy of Mr. Stephen for dissolving stone in the bladder, for the divulging of which eminent men petitioned Parliament for a grant of £5,000. It was granted, and what do we read of the remedy when divulged? That it consisted of calcined egg-shells or of lime obtained by a filthy and obscene process. Naturally, and like *all* secret remedies when divulged, it ceased to cure. Hartley—the famous Dr. Hartley—one of the most strenuous supporters of the grant, died of stone in the bladder after taking two hundred pounds of the remedy. In our day there is no such thing as a secret remedy in the true, or in any other than the trade, meaning of the word. We doctors know the composition of all of them. They are secret only to the gullible public, to whom they are to be sold. Pain annihilators, blood-purifiers, vegetable and animal extracts, botanical nostrums, invigorators, electric belts, amulets and chains, Asiatic, African electrical pills and phials, "green, blue, and yellow electricity"—there is nothing secret about them. When examined in our private or public laboratories they are all found to be commonplace in composition, or if they have anything not well worn in use it is merely the name of some indifferent or trivial matter—Indian grass or African leaf added, most often, and chiefly for the sake of novelty. These secrets are trade devices, with which we are not concerned. Let us visit those physicians who dabble in them with the severity of the code. I don't think that is asking more than is due to the honor of

the professional body and the welfare of the public.

In respect, then, of secret medicines at least, the world has up to this date lost nothing by the stern and scornful disapproval with which the medical profession regard these tricky nostrums, and by the punishment with which they visit, and always ought to visit, those who sell the honor of their calling and the free communication of medical knowledge which is the birthright of mankind for some mess of commercial pottage.

Finally, I will say a word or two of what is known as the etiquette of consultation. The patient, it is said, and is said cogently, has the right to determine whom he shall consult, and to change his medical adviser if he desires so to do. No one will dispute that. But, like other rights, it is limited by the legitimate claims of others; and a medical practitioner may justly object if he shall be, without explanation or courtesy, superseded in attending on a case. In such event, moreover, the superseding practitioner is morally and ethically bound to take due care that the same courtesy and respect which he individually would expect to receive be paid to his discarded colleague, not only by himself, but by those who have professionally consulted him.

Every day cases of this kind occur; few days pass without bringing to me some complicated question arising out of them. The pages of our British Medical Journal are full of such questions. Very often, all I have to do is to say: See Code, page so-and-so, section so-and-so—and that decides both the practice and the principle. Probably if that is the case with us, it might occur here also, and not less frequently. Of one case I became cognizant here only the other day. An eminent doctor in a capital city of the United States of America was called in, came and saw a patient severely ill, said he would return; when the family physician returned in the evening he was told, "But you are not any longer in charge—Dr. So-and-so has charge of the case." He said, "But I don't understand, I was here this morning." "Well, it was the particular wish of —— that the consulting physician whom you called in shall take charge, and you are not wanted." Exit family doctor.

Once more our College of Physicians explicitly directs that the physician called in consultation by a brother practitioner shall not express directly to the patient his individual views and the conclusions at which he arrives, but that whatever he has to say shall be said after consultation with the practitioner, and through his mouth; that he shall behave with the utmost courtesy and forbearance to such practitioner, to whom shall be left all explanations and statements of the conclusion resulting from the consultation. Were it otherwise, were consultants authorized to supersede or to snub the family doctor, the public client would be the first to suffer. For anything which creates ill-will or unnecessary friction between consultant and family practitioner tends to limit the range and frequency of consultations. Therefore is it forbidden to the consultant called in, subsequently to assume the sole charge of that patient, however he may be entreated to do so, or under whatever inducement. Were it otherwise, the attending or family physician could not call in a consultant without the fear being before his eyes of losing the charge of his patient. There would arise at once the temptation to limit and restrict consultations, and this would be an impediment in the way of ascertaining the best means of cure by consultation. The strict observance of such rules and of the whole code as to consultations may sometimes be something of a personal trial to the patient, something of a personal loss to the consultant; but it is a rule which is of infinite importance to the public welfare.

The maintenance of a high standard of professional honor, the acceptance, adoption, and enforcement of a detailed code of professional etiquette, the agreement by all and the observance by every individual of the whole range of limitations and restrictions which are set up by that code and by the logical deductions from it—these things are, I contend, demonstrably as valuable to public welfare as for any professional interests concerned or supposed to be concerned.

I infer from the repeated and enthusiastic plaudits with which you have honored me that the opinions and conclusions which I have ventured to bring before you have agreed with your sentiments, and are ac-

cepted by you sympathetically, and that you consider them opportune.

I have been encouraged by your continuous signs of general and warm approval to speak at greater length than I had intended. But there is yet much more to say. In thanking you now for this most gratifying ratification, by the unbroken plaudits of this representative general meeting, of the argument which I have ventured to state, I will only add that I shall be most happy to hear privately from anyone who has doubts to solve or arguments to suggest, either for or against or in supplement of those which I have developed before you.

TREATMENT OF SCLEROSIS OF THE SPINE.*

BY EPHRAIM CUTTER, M.D.

This pathological lesion of the spinal cord has been so fully set forth that there is no need of further definition than that it is a thickening or solidifying of the interstitial substance, which one late authority depicts as absolutely black—white being accepted as the color of the normal tissues of the cord.

Why write this? This Association is formed to get the views of the profession on diseases—views that mirror the present rate of knowledge. New views are especially desired to make the pictures as complete as possible.

The writer thinks the presentations as to sclerosis have been incomplete, inasmuch as he has not seen what he regards as the proper treatment, substantiated by a second witness (the writer is a second witness)—treatment that shows sclerosis to be not incurable, while patients with sclerosis are abundant everywhere and ought to have the benefit of the best ideas in relation to their disease.

The principles of treatment are somewhat as follows:

1. It is an organic disease, a lesion of structure, a degraded tissue usurping the place of normal tissue. The fibrous sheaths of the nerve-fibres are thickened so as to form the hardening or sclerosis (to use a Greek word) and to produce the paralysis called locomotor ataxia.

Thickening of the fibrous nerve-sheaths in any part of the body pinches the contained nerve and produces more or less paralysis, numbness, and pain (for pain is the expression of a partial paralysis). You may smite with a birch switch and cause pain, or smite with a steel bar and produce numbness. In both there is paralysis, but differing in degree.

2. It is a disease of nutrition. The law of the body systemic, whereby normal tissue is removed and replaced continually, is violated. From weakened innervation, normal nerve tissue is replaced by connective fibrous tissue. The weakened innervation comes from deficient supply of vital force, hence the partial paralysis. Partial paralysis may also come from blows, wounds, contusions, or from the gases of fermenting food in large excess and long-continued in the alimentary canal, as I have been taught and believe. There is no doubt of the effect of traumatism. There may be doubt as to food producing paralysis by fermentation products in the alimentary canal. It is the aim to dissipate those doubts farther on.

3. Some may insist that the diagnosis must be verified by autopsies. Veterinarians have the advantage over physicians, for under government they can kill and make autopsies. I am afraid that if human patients were killed for diagnosis as kine are, the difficulties of medical jurisprudence would be greater than now. But we must treat the cases that have the symptoms of sclerosis, and that too without autopsical diagnosis. If such cases are relieved and cured we must class them as sclerosis, or give up the practice of medicine. Common sense and common law command such a course. Indeed, it is daily history. Seeing then that sclerosis must be treated, it is advised:

1. To give food to improve the nutrition, so that abnormal fibrous tissue deposited may be replaced by normal nerve and fibrous tissue in proper proportion, such as nature will deposit if she has the materials and force.

2. Food must be stopped which has acted as causal. Sydenham lays down the principle that nature cures disease if she has time and means enough. In other words, that she will remove abnormally deposited tissues and

*Read before the Mississippi Valley Medical Association, October, 1893.

replace them with normal. It is too generally thought that abnormal tissues do not change as the normal tissues do—for example, that a fibrous tumor may not change as quickly; but when you see fibroids, as I have, as large as a man's fist entirely disappear within a month, it would seem that this interstitial change was more rapid than in the normal changes of the body. The old idea was, that it takes seven years for the whole body to be renewed by nutrition. As the friable and chalky condition of teeth has given place to normal firm, fibrous texture in the space of three months' time, it is possible that Sir Lionel Playfair's estimate of seven months is more correct than the popular one of seven years. Such food can be had as will need the minimum of power to digest, and give the maximum of vital force after digestion, besides being lived on, as a general rule, when properly prepared, indefinitely. I have had cases of sclerosis of the spine recover under such diet treatment. One case was told by medical authority after cure, that it could not be believed he was the same man.

Let us proceed on to the causal food of sclerosis, and afterwards recur to the treatment, as perhaps the matter will thus be better understood.

To stop causes is the first and most important step to prevent results. Let causes be not removed, and, no matter how much is done, results continue. If a certain food makes one sick, the best way to make well is to stop that food. These axioms would not be repeated here were it not that medical men seem oblivious of them as to patient and physician. Patients will cheerfully submit to amputation, when they will not cut off food they like to eat. Physicians, feeling the extreme difficulty of dieting patients, will give up the main question and do the best they can, gyrating about the central trouble, in place of hitting the nail on the head and of doing away with the prime evil at once and at the outset. Hence comes the idea of the incurability of sclerosis.

Evidence goes to show that sclerosis comes from starchy and sugary foods in excess, and in inactivity. This is an American idea set forth in "The Relations of Alimentation and Disease," by J. H. Salisbury, LL.D. (New York: J. H. Vail, 1888). The author hired men and purchased swine, and fed them on starchy and sugary food exclusively. No one has set these experiments aside by a repetition and getting different results. Until then they must stand as authority.

I have time to give but a few instances. Six strong, healthy men were fed on baked beans and coffee, continued eighteen days. By the eighth day all were dizzy; and by the fourteenth day the feet of all felt the sensation of prickling, and all were numb but one, who felt intoxicated. By the eighteenth day all had feet drag in walking but one, who walked with feet and legs numb. The symptoms of locomotor ataxia were so marked on the eleventh day that none of the six could walk without support. All wobbled and dragged their legs, not being able to lift the feet from the floor. (*Loc. cit.*, pp. 186–9.) Each lost from 19 to 29 pounds by weight in nineteen days' diet. But in four days of meat diet they all lost the symptoms of sclerosis and were well.

In this connection it may be said that alcoholism is a species of acute sclerosis. May not the spine be temporarily hardened by alcohol in drunkards? The late Dr. Adino B. Hall, of Boston, told me that he once bled a drunkard and saw the alcohol burn in the blood withdrawn. It is quite certain that in these baked-beans-diet people alcohol was found in the alimentary canal, made by the fermentation of the bean starch. The bowels of all were bloated badly. All were constipated and colicky from the paralyzing influence of the carbonic acid gas. All had diarrhœa. Indeed, all the cases looked as if poisoned by alcohol and carbon dioxide. The speedy recovery was due to the period of exposure being too short for organic lesions save the supposed ones from alcohol.

Dr. Salisbury (*loc. cit.*) bought 624+404= 1028 swine, and fed them on distillery slop. In ten to fifteen days they began to reel in hind parts; afterwards gradual weakening in the limbs, labored breathing on moderate exercise, staggering and often a dragging of hind legs. In the fatal cases which occurred in two months, all control was lost over the hind parts, and often they were unable to walk or stand without support. Out of 104 autopsies, 82 were found

with thickened intestines due to the extravagant development of the fibrous tissues. It is a matter of regret that the spinal cords were not examined as to sclerosis; but for our purpose, until some one upsets these reports by others made under like circumstances, I see no other way than to accept and receive them as evidence that the fermentation of starchy and sugary food does produce sclerosis or fibrous thickening in the spinal cord. Indeed, I have acted on it and had good results in my cases.

Treatment.—Knowing what I do, I should be recreant to duty if I had not followed in my cases the treatment, foreshadowed in the baked-bean experiments, called the Salisbury plans, which have been freely made known, clearly as to detail of cause and cure, in the work cited, for five years. I have found the diagnosis greatly helped by the morphological examination of the blood, by eliminating rheumatism as a cause for the severe pains which complicate.

Mr. ——, aged 26, in walking carried his head so that it lay almost on his right shoulder. His body when erect was a torso, and the spine was twisted so that the right arm hung down nearly to the ankle. Unassisted locomotion was impossible at the outset of treatment. Pains in neck, head and limbs were severe most of the time. When stripped and laid flat on the back, or hung with a yoke from above, the body was straight. When he journeyed he had to recline. He was kept for a year on a pint of hot water one hour before meals and on going to bed; beef chopped so as to remove the white fibrous tissue (which ferments), broiled rare, not raw, seasoned while hot with butter, pepper, and salt; celery; horse-radish as a relish. No other food allowed. After a year he was allowed some wheat bread or potato, in the proportion of one part by bulk to two of meat. This was increased by adding the whites of eggs, tea and coffee. The result is that he can walk upright, is free from pain, and is an astonishment to the medical gentlemen who knew him at the first of his illness. Simple tonics, with some simple digestive, as glycerined pepsin (P. D. & Co.), were given as aids. A close watch was kept on the secretions to insure their normality, and to see to it that the patient did not eat forbidden things.

The principle is to get rid of fermenting food, live on foods that do not have the alcoholic fermentation, oil the machine with medicines to make it run more smoothly, and nature will cure almost any lesion of nutrition if time enough is given. The profession do not properly appreciate the terrible effects of gas in excess in the alimentary canal. Those who doubt are respectfully requested not to dispute, but to live on baked beans and coffee alone for twenty days, and then criticise the paper.

New York City.

PRIMITIVE ALIMENTARY HYGIENE.

BY DUJARDIN–BEAUMETZ.

Primitive man was of necessity a vegetarian, nourishing himself almost exclusively upon roots and fruits. But in the degree that his inventive genius enabled him to construct weapons which rendered him the master of the creatures surrounding him, he little by little abandoned his vegetarian *régime* and became carnivorous and ichthyophagous. At a more advanced period in his history he called into requisition an element which distinguishes him from all the animate beings of his environment—*fire*.

I do not know whether anyone has ever been struck by the fact, as I have, that the most intelligent animals, or those which are domesticated and our companions, have never utilized fire. Both the ape and the dog enjoy and bask in the heat of the hearth, but neither would ever dream of maintaining the flame, the warmth from which is so agreeable. Man alone, profiting from the celestial fire, learned to utilize it for his needs, and at an early date the troglodyte at the entrance of his cavern roasted the animals captured in the chase. Hence the humorous definition of man given by Graves, who terms him the *cooking animal*. To these two elements—heat produced by fire, and alimentation modified thereby—must be joined another factor, viz., man's disposition to multiply his species, forming families or associations which permit him to struggle with advantage against the enemies confronting him.

These are the three great factors in the civilization of various peoples—heat, alimen-

tation, procreation; and these three great beacon-lights illumine the primitive civilizations of the Hindu, Egyptian, Jewish, and Mohammedan races.

To us, who constitute one of the branches of the Indo-European race, India presents the greatest interest, and it is readily seen how many of the dietetic regulations, proceeding from religious sources amongst the Hindus, have been propagated, reaching our own time through ancestral and mythical agencies. A general view of Hindu mythology reveals the prevailing idea that the sun gave heat and light to man, thus constituting the first element of mythology or religion. To the Hindu, the sun, rising each day, is a god called *Agni*, to whom the greatest number of sacred hymns in the *Vedas* are addressed.

But soon another sentiment is mingled with the foregoing, viz., that of generation. If Agni causes the birth of each new day, man may also be the generator or procreator, and, in his turn, can transmit the flame which animates him; hence the worship of the Phallus which we find in all primitive religions. From the god of light and fire, Agni, it is but a step to generation, and then to the sacred beverage. It is the *soma* which, like Agni, also gives forth the innate fire and intoxicating principle; and in order to connect this further with the idea of generation, it is obtained by a churning process which imitates the reproductive act—the churn representing the yoni, and the staff which agitates the mixture the lingam. When the gods of the Vedic Olympus desired to obtain the sacred beverage reserved to them and which gives immortality, they churned the entire ocean with the aid of Mount Mandara, and they caused to issue from the billows *Dhanvantari* holding in his hands a vase containing the *amrita*, which is nothing else than the ambrosia of the Greeks.

As for the soma of mortals, it was obtained by a mixture of clarified butter and fermentable plants, such as the *Asclepias asvida*, sour milk and grain. This beverage produced intoxication, and nothing is more curious in the Vedic rites than the hymns consecrated thereto.

"A moiety of me is in the Heaven," says the Veda; "I have extended the other unto the earth; I am the greatest, and I lift myself unto the clouds." And, further on: "The maladies without strength have fled; they trembled and were frightened, they who disturb; the puissant soma descended into us; we have reached the point where life is prolonged." Thus, the soma is deified personification of fire; it is the aliment which imparts and maintains the powers and dispels all maladies; of this fact we find countless repetitions in the Vedic hymns: "Let the soma, at the sound of our songs, flow in honor of Indra, and disease flee far from us. . . . The soma cures all that is ill; through it the blind hath seen and the paralyzed hath again walked."*

But in order to give to alimentary hygiene an incontestable authority, it is placed under the *régime* of the gods. It is they who dictate hygienic precepts, and Sucruta in his *Ayur-Veda* devotes two chapters to wholesome and unwholesome substances.

In the analysis of these *Vedas*, given by Lietard, he shows in the chapter on aliments and beverages that Sucruta divides them into eleven classes. At the head is placed rice—readily understood when it is recalled that in the alimentation of Orientals rice occupies the foremost place.

There is also another book, in which is embodied all that treats of alimentary hygiene—the book of the laws of Manou, or *Manava-Dharma-Sastra*. Manou is probably a fictitious personage, the name being similar to that of Menes or Minos. Manou, of course, was deified, and the book of the law was declared to have been revealed to him by Brahma.

In the fourth and fifth books of the Manava-Dharma-Sastra are found a number of interesting matters bearing on alimentary hygiene. Not only are indicated certain forbidden aliments, but further is asserted the necessity of the fulfillment of certain conditions by those offering the aliments. Thus, the food which has been offered by a fool, by a man in anger, by a sick person, or upon which a louse has fallen, or which has been intentionally touched with the foot, is impure. The same applies to aliment touched

*Rig-Veda, vol. viii, p. 68, 2, and vol. ix, p. 85, 1.

by a menstruating female, picked at by a bird, or in previous contact with a dog.

One of the chapters is singularly strange and asserts: "The nourishment of a physician, of a hunter, of a wayward person, of an eater of scrapings, of a ferocious man, of a woman who is *enceinte*, of a man who quits the table before the others to perform his ablution, that of a woman whose ten days of purification after gestation have not expired, is impure." Further on, this question of the physician recurs (Sec. 220): "To eat the food of a physician is to eat pus; that of a shameless woman, is to eat semen; that of a usurer, excrement; that of an armorer, impure things." And he adds: "For having eaten the nourishment of one of these persons, one must fast for three days."*

In the fifth book there is a long enumeration of the substances permitted and forbidden. In paragraph 5 occurs the following citation: "Garlic, onions, leeks, mushrooms, and all vegetables growing in the midst of impure matters, should not be eaten by the *dwidjas*." Under the name of *dwidjas* are comprised the regenerated men belonging to one of the highest classes of Brahmans. As for milk, it must be obtained only from animals which have not suffered the parturient act during the previous ten days; he rejects the milk of all whose hoof is not cloven. The flesh of all carnivorous birds and fishes is also rejected. Meats are forbidden to all Brahmans, the text of the article being as follows:

"In considering attentively the formation of flesh and the death or enslavement of animated beings, the *dwidja* is to abstain from all kinds of meat, even from that which is permitted;" and the following verse completes the thought: "He who, conforming to the law, does not eat meat, like a vampire, invites affection in this world and is not afflicted by maladies."

In another verse we encounter this same idea: "By living upon fruits, upon pure roots and grains which form the nourishment of the anchorites, one does not obtain so great a recompense as in abstaining entirely from the flesh of animals." The word flesh even gives rise to a pun; in the Sanscrit it is written *mamsa; he* and *me* are written *mam* and *sa*, hence the text of another verse: "He me (*mamsa*) devours in the other world, he whose flesh I have eaten here below." From this reflection, according to the sages, is probably derived the word signifying flesh (mamsa).

As for those who do not seek to attain the state of *dwidja*, Manou exacts the consecration of animals to divinity, also that all objects serving for alimentation shall be purified with great care. Hot water is specially recommended for the cleansing of vessels. Also is made the singular distinction between the various mucous membranes of the economy: "All the cavities situated above the navel are pure; those below are impure."

Such are the alimentary directions embodied in the sacred books of India; they may be summarized as follows:

A severe *régime* for those who wish to attain a high degree of moral and physical purity, and the manifest predominance of vegetables over flesh alimentation:

Very minute rules for determining whether this or that aliment is pure or impure, and the necessity of always offering to the divinities the foods partaken of.

Approximately the same rules obtained amongst the Egyptians, save that the elevated and sacerdotal class were carnivorous, while, on the contrary, the inferior classes were (and are) vegetarians. In Egypt, it was by invoking divinity that rules of hygiene, destined to govern alimentation, were imposed.

Likewise, from the caste point of view, the inferior class, or (I should say) the impure class, were compelled to subsist almost exclusively upon the sorgho (Herodotus). But the sacred caste partook of meat, and that brought to the temple became their property. In his remarkable work upon the medical archæology of Egypt and Judea, Beugnies-Corbeau dwells at length on this point,* and concludes as follows: "In Egypt the popular caste, like the fellah of our day, was almost exclusively given to vegetarianism and the eating of fish. The aristocratic and

* *Lois de Manou* (translation of Loiseleur-Deslongchamps, Paris, 1833), fourth book, p. 153 *et passim*.

* Beugnies-Corbeau, de Givet. *Archéologie Médicale de l'Égypte et de la Judée; police des viandes alimentaires (médecine et hygiène)*. Liége, 1801.

sacerdotal castes ate only a part of the beef, hare, or mutton, after it had been subjected to inflexible sanitary control." Of this inflexible control we find the details in Herodotus. With extreme minuteness the priests examined the animals to be immolated to the divinities; they scrutinized each victim from all sides, and rejected it pitilessly when it failed to fulfill the conditions imposed by the law.

An animal once slaughtered, the head was rejected as impure, as were also the intestines; then, after leaving in the other viscera and the fat, they cut off the legs, the upper portions of the haunches, the shoulders and the neck, and, filling the gaping abdomen with bread, pure flour, honey, dried grapes, figs, incense, myrrh and aromatics, roasted the stuffed trunk over the flames of the sacrificial pile. Care was taken during the operation to baste the gigantic roast with oil; and when the process was considered finished, the priests seated themselves at the banquet-table and ate of the sacrifice.

Not all animals were entitled to the honor of these festivals: the cow was rejected on account of Isis, who represented the cow-woman. The swine was considered impure; even contact with it while animate produced a taint. The temples were forbidden to swine-herds, and a sacrifice of a swine was deemed an insult to the gods. Luna and Bacchus alone tolerated this sacrifice, and only during the full moon could pork be partaken of without pollution. If the fellah partook of fish, the priests denied its use to themselves. Amongst the leguminosæ, one—the bean—was considered impure, but of the cause of this exclusion I am ignorant.

Now may be considered a most important point, viz., the alimentary hygiene of the Jews. Here the indications are more precise, and the great legislator and hygienist, Moses, exhibits a knowledge of hygienic and alimentary processes scarcely excelled at the present day. One is astounded and forced to admiration on reading of the indications which permit determining whether the flesh of slaughtered animals may be consumed, or whether, on the contrary, such is to be excluded from alimentation. Little change would be required to make these Mosaic rules a guide to modern veterinarians and the inspectors at the abattoirs in nineteenth-century cities.

In order to base these regulations of sanitary police upon an incontrovertible law, Moses, of course, enounced them as religious rules, and they are all to be found in one of the books of the Talmud, termed *Holin*.

There are three kinds of pollution proceeding from the absorption of impure food: the most horrible taint is the *nebilah*: it is a veritable sacrilege, and results from the consumption of cadavers and carrion, that is, of animals which have not been sacrificed according to the law.

The *tamah* is a lesser pollution, and results from the consumption of forbidden animals. Moses based this exclusion particularly on certain conditions of structure. His people might eat only the flesh of creatures with cloven hoof (bidactyls) and ruminating habit; but, says the Talmud, "ye shall not eat those which ruminate only, or which alone have the cloven hoof." Thus he forbade game, rodents, reptiles, and especially pork. Again, adds the Talmud, "The swine shall be forbidden to you, for, though he has the bidactyl hoof, he does not ruminate, and so is polluted for you."

He forbids also oily fish and wild birds. As for blood, it is absolutely interdicted, and this phrase occurs often in the Talmud: "Ye shall not eat blood, for it is the soul of the flesh." And in speaking thus, Moses affirmed a physiological truth.

The third degree of impurity, constituting only a conditional taint, is the *térépha*. It results from lesions discovered on opening sacrificed animals, and a description is given of all that produces this taint, such as intestinal wounds, pulmonary maladies, fractured ribs, etc. The most important and interesting are described with great care, and likewise the means of recognition. Thus when the lung is hepatized or fibrous, the animal is *térépha*. I cannot here give an enumeration of all these lesions, but must refer the reader to the work of Beugnies-Corbeau, or to that of Rabbinovicz, if it is desired to study the subject more profoundly.*

Moses, too, was one of the most resolute adversaries of drunkenness, and condemned

* Rabbinovicz, *La Médecine du Talmud*.

to death those addicted thereto. "Behold your son," he saith, "an indocile, an incorrigible, who heedeth not your voice and giveth himself up unto debauch and drunkenness; all the men of the city will stone him, he shall die."

He also insists on the necessity of drinking water, and considers it the chosen beverage for those who are to lead pure lives, such as the priests and Nazarites (Leviticus, x, 8, 9; Numbers, vi, 2). Further on, he adds: "He shall separate himself from wine and strong drink, and shall drink no vinegar of wine or vinegar of strong drink, neither shall he drink any liquor of grapes, nor eat moist grapes or dried" (Leviticus, x, 8, 9; Numbers, vi, 3). Beugnies-Corbeau remarks that *schekar*, mentioned so frequently in Leviticus, has been considered a species of beer—Cerevisia. But in reality the true sense of the word is not known, and probably it applies to all spirituous beverages made from dates, honey, figs, rye, the cereals, and the like.

The Bible constantly dwells on the evils of drunkenness. The following are a few more citations, which I continue to borrow from Beugnies-Corbeau: "For the drunkard and the glutton shall come to poverty; and drowsiness shall clothe a man with rags." (Proverbs, xxiii, 18.) . . . "Who hath woe? Who hath sorrow? Who hath contentions? Who hath babbling? Who hath wounds without cause? Who hath redness of eyes? They that tarry long at the wine." (Proverbs, xxiii, 29.) . . . "The Lord hath mingled a perverse spirit in the midst thereof; and they have caused Egypt to err in every work thereof, as a drunken man staggereth in his vomit." (Isaiah, xix, 14.)

After branding those whom he calls the drunkards of Ephraim, the prophet addresses himself to Judah and says: "But they also have erred through wine, and through strong drink are out of the way; the priest and the prophet have erred through strong drink, they are swallowed up of wine, they are out of the way through strong drink, they err in vision, they stumble in judgment. For all tables are full of vomit and filthiness, so that there is no place clean." (Isaiah, xxviii, 7.)

As is obvious from these various citations, intoxication has always been condemned by the Jewish people; and it may be added that this tradition is perpetuated in the Israelitish race. In a recent work on alcoholism in France, and particularly in the provinces of the East, Dr. Lardier (of Rambervillers) has stated the rarity of alcoholism amongst the Israelites, and in this connection cites the statistics of individuals prosecuted for drunkenness in the city of New York, the number of Hebrews being almost *nil*. In explanation of this fact, apart from ancestral influence, he points to the love of lucre, the love of labor, and the love of family which are so highly developed in this race. Obviously, a further influence may be added: the religious influence.

To terminate the cycle, it only remains to speak of the *Koran*.

Mahomet reproduces in the Koran in part the regulations of Moses; therein are likewise textually reproduced the same traditions and prescriptions. He, however, causes the Draconian and inflexible law of Moses to be superseded by an idea of pardon and mercy; time and again occurs the following phrase: "Ye are forbidden to eat dead animals, blood, the flesh of the swine and of any animal over which has been invoked any name other than that of God. He who offends, constrained by necessity, and not as a rebel and transgressor, shall not be culpable; God is indulgent and pitiful."

Further on, the Koran gives the following enumeration: "Dead animals, blood, pork, all that has been killed under another name than that of God, animals suffocated, beaten to death, killed by a fall or by a horn-thrust, those which have been bitten by a ferocious beast unless purified by bleeding, that which has been sacrificed on the altar of idols, all that is forbidden to you."*

The Mosaic condemnation of drunkenness applies also to the Mohammedan. In verse 92 of Chapter V we find: "Oh, believers! wine, games of chance, idols, and the hazard of the sport of arrows are an abomination invented by Satan. Abstain therefrom and ye shall be happy." In another verse: "Oh, believers, never pray when besotted; wait until ye can comprehend the words that ye utter."

* *Le Coran Analysé*, par Jules de la Baume. Paris, 1878.

On the other hand, Mahomet promised an infinite intoxication in his paradise, and he exclaims: "Behold the picture of the paradise which has been promised to pious men: streams of wine—the delight of those who shall drink thereof."

Such, in their *ensemble*, are the rules borrowed from primitive religions, showing the importance that ancient legislators attached to the study of alimentary hygiene. I need dwell but briefly on the rôle of Christianity, for, though Christ established an admirable philosophic religion, it has little relation to hygienic codes. In addressing himself to the soul, he abandoned all care for the carnal envelope which surrounds it; and if the early Fathers were observed to lead the life of anchorites and cenobites, it was rather to overcome the appetites of the body, than in pursuance of a hygienic rule, that they adhered to the rigorous regulations involved in their fastings and macerations.

A MEDICAL CENTENARIAN.

There has just died, at his residence in London, Dr. Severin Wielobycki, who was born on Jan. 8, 1793, and had consequently attained the age of one hundred years and eight months. He was the son of a Polish judge, and fought as captain of a cavalry regiment in thirty-six battles during the last efforts for the freedom of Poland, and on their failure had to leave that country. Finding his way to Edinburgh, he applied himself to the study of medicine, and graduated M. D. at the unusual age of 52, and afterwards practiced in various places, finally retiring twenty-seven years ago and settling in a London suburb. His centenary was celebrated last January, when the British Medical Temperance Association, of which he was a member, presented him with an address of congratulation, and the Society for the Study of Inebriety, of which he was a vice-president, held a reception in his honor. Except that latterly he was very deaf, he retained all his faculties up to the last, and read small type without the aid of glasses. Until attacked by influenza two years ago, he regularly made his way to the summit of Primrose Hill by 5 o'clock every morning, summer and winter, and each day walked twelve miles. He leaves a widow aged 90.

Correspondence.

"DR. HAMMOND AND THE MEDICAL PROFESSION."

From the columns of the New York Medical Journal.

Dear Sir:—My respect for and my sympathy with the medical profession in America, and my knowledge of its sentiments, forbid me to regard Dr. William A. Hammond as its representative in the defense which he puts forward in your columns of Sept. 16th of the practices of publicity-hunting by newspaper interviews, newspaper portraits, and of the use of and traffic in secret preparations, etc. I have in the course of recent travel received personally from many hundreds of prominent and representative physicians in Milwaukee, Washington, Boston, Philadelphia, Chicago, Cincinnati, Detroit, and from all parts of the United States, their cordial congratulations on the tone and substance of the addresses which I had the honor to deliver at Milwaukee and Washington. I have been assured on all hands of the entire sympathy of the great body of the profession in the views therein laid down and discussed. I should have been surprised, however, and perhaps disappointed, if they had not elicited some expression of pain and anger from certain quarters. "Let the galled jade wince; the withers" of the great American medical profession are, I am assured, "unwrung." Your correspondent, in an access of ethical agnosticism, assures that the enumeration of ethical data as to medical conduct was, or could be, a reproval direct or implied to the medical profession of America. That is an unmerited insult which he addresses to his profession, and indicates a view which I apprehend is special to himself. Let him enjoy the practices which he defends, I do not think that he is likely to find much support or sympathy in them from medical men in good standing. His account of the position of medical men in Great Britain is a parody undeserving of serious notice. So as to myself, whom he favors with some personal abuse, I have been avowedly the scientific adviser to, but it is untrue that I have ever held any of the stock of, the Apollinaris Water Company. As to his other trivialities, I was the guest of the Pan-Ameri-

can Medical Congress, and on entering its headquarters I registered in ceremonious form.

I have no desire to be honored amongst "the Pan-Anglicans," "the Loyal Legion," "the Fat Men of America," and the other objects of lay interest with whom Dr. Hammond puts medical men on a par, and I do not agree with him that medical men should desire to share with them the honor of newspaper notoriety. I do not believe that any details of my medical career have ever appeared in any lay paper.

I suggest that it might be desirable for Dr. Hammond to rely less upon his imagination for his facts, and not to assume to speak for a profession from which he has no sort of mandate, and which would, I am well assured, repudiate, if consulted, both his advocacy and his methods of action and of expression. I am assured that he utterly misrepresents that profession, both in his statement of principles which he ascribes to it, and in his abuse of myself.

I am, sir,

Yours respectfully,
ERNEST HART.

SLOW PULSE.

To the Editor of the MEDICAL AGE:

The causes which produce slow pulse are so accurately classified by Dr. D. W. Prentiss, of St. Louis, that I believe they should have wide dissemination. They are:

Diseases or injuries to the nerve centres, producing either irritation of the pneumogastric or paralysis of the sympathetic (accelerator) nerves of the heart.

Disease or injury of the pneumogastric nerve, increasing its irritability.

Disease or injury of the sympathetic nerves of the heart, paralyzing them.

Disease of the cardiac ganglia, by which the influence of the pneumogastric nerve preponderates.

Disease of the heart muscle (degeneration), whereby it fails to respond to the normal stimulus.

The action of poisons, as lead or tobacco, either on nerve endings or centres. The poison generated in salt fish. Also the poison of certain febrile diseases, algid pernicious fever. Another possibility is malaria poisoning.

S. A. G.

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

REGULAR MEETING, Sept. 7, 1893.

The meeting was devoted to reports of cases.

Dr. O. S. Armstrong: Have had three cases of chronic colitis not affecting the stomach. In each the rise of temperature was noticeable only in the evening, and then only to the amount of one-half a degree. Not much thirst. Medicine had but little effect in cleaning the tongue. When patient moved around, diarrhœa was aggravated. Bismuth with salol, pushed, brought on constipation and the patient complained of pain; with return of diarrhœa, pain ceased.

Had a case of lactational insanity about sixteen years ago; the history of the onset was quite sudden—no cause for change. Patient, on retiring, suddenly began seeing queer things and pointing to imaginary objects upon the wall. I advised weaning of child, plenty of outdoor air, and quiet—not much medicine. Patient recovered.

Another case was that of a Jewish lady, despondent, morose, and at times given to suicidal tendencies. Had retroversion and some subinvolution; appetite poor; bowels constipated; tongue coated; no tenderness over abdomen. Large doses of sulphonal were given, which for a few nights gave sleep, but afterwards produced no effect; other hypnotics were equally inefficacious. Had not eaten much, but took about a pint of milk a day; lost but little flesh. She sometimes became so boisterous that it was with difficulty she was restrained from doing damage to herself and those around her. At times bit her finger considerably.

Dr. E. T. Milligan: Last year I treated a case following parturition, that was eight days without sleep. Gave large doses of bromide of potassium alone, and also combined with morphine and chloral, without result. Lost sight of patient, as she was taken to the country.

Dr. F. J. Parker: Had a patient that had four distinct maniacal seizures following an equal number of childbirths. Each time patient was treated with all the known hypnotics for from one to six weeks at her home,

with negative results, but each time on being sent to a retreat she would recover with but little medicine in from two to four weeks. No history of insanity in family.

Dr. H. Honner: I would call the first case of Dr. Armstrong's, and Dr. Parker's case, acute mania; the second case of Dr. Armstrong's, melancholia. The treatment in melancholia would be opium in small doses, which yields the best results.

Dr. S. Bell: I accept Dr. Honner's classification in these cases. In insane institutions, medicine is given with good results in the acute forms; the chronic cases go on from bad to worse and ultimately die.

Dr. J. Newell: Where we have patients with hallucinations and other symptoms of hysterical insanity, medicine is of little avail. Change of surroundings, etc., is indicated.

Dr. J. S. Dean reported a case of rectal stricture and recto-vaginal fistula. Mrs. G——, æt. 30, had diphtheria, soon after she was married, that was complicated with diarrhœa; recovering, the complication continued in chronic form. After this seizure she had a small vulvar abscess which opened, and discharged for some time, but finally closed spontaneously. Last fall the diarrhœa became very bad, and in December she was obliged to go to bed permanently, where I found her May 25, 1893. She was soiling from 90 to 100 cloths each day with "the discharge." Temperature, 102° F.; pulse, 144. Tympanites over whole abdomen, and so much tenderness that deep palpation was impossible; much pain was complained of in both iliac regions. Local examination revealed rectal stricture about one inch from the anus that would not admit the end of the index finger, and just below this a recto-vaginal fistula that would readily admit the finger. The uterus was atrophied somewhat, the cervix fattened and adherent to the vesical wall; no discharge from cervix. Had not menstruated for many months, and had never borne children.

The diarrhœa was now easily explained, as it consisted almost entirely of extremely fetid pus; and inquiry elicited the fact that she was having from two to three fæcal evacuations daily. I was not able to make an examination of the deep pelvic viscera on account of the closure of the rectum and the general tenderness.

The left leg was then flexed at knee and thigh, and the foot badly swollen; kidneys and bladder normal.

The treatment at first was daily washing-out of the rectum with peroxide of hydrogen, and later on with copious injections of 10-per-cent. boracic acid solution as hot as could be borne. These were followed by injections of one pint of nitrate-of-silver solution, one grain to the ounce. The stricture was gradually dilated until a large-size bougie could be passed; but there was little general improvement; the discharge became a little less offensive and somewhat less in amount; appetite also improved for a time under iron and the bitter tonics.

Dr. E. B. Smith saw the case with me about the middle of June, and we agreed the only chance was to build up strength enough to warrant an operation, as the excessive discharge was gradually reducing her strength. This I was never able to accomplish—bad food and poor nursing, with the severity of the case, resulted in a steady decline in strength until she died of exhaustion August 17th. I was unable to obtain a post-mortem, and so cannot state whether there was any ovarian trouble or how extensive was the suppurating tract above the stricture. I neglected to state that there was no history of tuberculosis. The interesting point to me was the great length of time she was able to resist the extreme suppuration and the hectic fever with the poor food and poor nursing. The family were very poor and unable to supply the things necessary for comfort.

E. B. Smith,
Secretary.

WAYNE COUNTY MEDICAL SOCIETY OFFICERS.

At the annual meeting of the Wayne County Medical Society, Detroit, the following officers were elected: Dr. Hal C. Wyman, President; Dr. E. B. Smith, Vice-President; Dr. R. H. Honner, Secretary; Dr. C. Henri Leonard, Treasurer; Drs. E. W. Jenks, J. E. Clark, D. L. Dakin, J. E. Westgate, and James Newell, Board of Directors.

E. B. Smith, Sec'y.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE CODE OF ETHICS NOT A PROFESSIONAL LUXURY.

In our brief allusion to the article by Mr. Ernest Hart on "Medical Etiquette, Quacks, and Secret Remedies," we were forced by the stress of waiting presses to dismiss with inadequate comment this able exposition of a most important subject. Nothing could be more lucid, terse, and convincing than the argument with which the editor of the British Medical Journal makes clear the paramount value, to the public and to the interests of suffering humanity, of that code of ethics which is only too often regarded as an artificial and overstrained system of idle scruples, still cherished indeed by dainty and conservative practitioners but unworthy of respect from would-be innovators. The code of ethics, Mr. Hart makes clear, is pervaded in all its restrictions by a sense of justice to the client and by considerations of public good and general welfare, which transcend the mere motive of professional dignity. To abrogate or violate this code, then, means not only to lower and degrade the sense of professional honor, but to inflict material injury on the people at large.

Quoting Dr. Johnson's definition of the quack, Mr. Hart emphasizes the fact that the possession of a medical degree by no means sanctions artful self-advertisement, the violation of a professional confidence, or the paltering with secret medicines.

"The most common and dangerous form of self-advertisement is that which is dangled before the eyes of a doctor by the newspaper editor and the interviewer. He is tempted to give his account of a new surgical operation which he has invented, of a new medicine which is in course of investigation, of a treatment recommended for some prevalent disease; to divulge the secrets of the sick-room, and to report without the authority or permission of his client on the incidents and course of the illness of a distinguished or a notorious patient. All this he often does to the scorn and contempt of his brethren, but to the satisfaction of a demoralized press, and to meet the requirements of a public possessed by a groveling curiosity. . . . . The physician should have earned his reputation, not by the arts of notoriety, not by bold or concealed advertisements whether of himself or his books, not by the purchased or favored prominence accorded to him by the uncritical, undiscriminating or interested journalist; but by his colleagues of accepted and approved knowledge. It is for that reason, and to save a man, as he often needs to be saved, from himself, and from the temptations with which he is assailed, that our code in Great Britain is in this respect so detailed, so strict, and so easily capable of enforcement. I venture to submit that it would be an evil day for the public as for the profession when, if ever, those detailed regulations were abolished or held in light esteem."

On the point of the physician's duty in respect to secret remedies, the argument is incisive and unmistakable:

"That a man should possess and trade in a secret remedy is a source of public danger as well as an offense against professional morality. He has a right to expect, and he is bound to give to his fellow-practitioner, every possible aid and assistance in the treatment and in the healing of the sick. He has received such knowledge and aid from his predecessors, he daily and continually receives it from his colleagues and contemporaries, to whose knowledge and experience, and to whose investigations openly stated and submitted to critical discussion, he owes the great bulk of his knowledge and the means of qualifying himself for the art which he practices. A new method of treatment, a new drug, or a new dogma in medicine, is like a doctrine or a dogma or a deduction in theology. It is or may be a means of physical salvation, as the other is or may be a means of spiritual salvation. The man who keeps such as a profitable

secret, whether physician or minister, is a traitor to his profession or humanity, and is false to his mission. . . . . *He who prescribes a secret remedy covers and condones an act of treachery and an infraction of duty.* He is an accomplice in the guilt, and cannot go scot-free. He who derives an open or concealed profit from such remedies is an accomplice in the offense. He who by written or verbal statement supports, maintains, or extends such products, *he who becomes a partner in a company or a firm which deals in them*, is obviously false to his mission, untrue to his sacred obligations as a physician, and a dishonor to his profession."

The theory that a secret remedy may sometimes possess great intrinsic value, hence justify employment by the physician, Mr. Hart shatters to pieces. The past history of mankind, he declares, may be searched and ransacked without our discovering one single item of even the slightest value in the voluminous list of secret remedies. They are commonplace in composition, and secret only to the gullible public. The stern and scornful disapproval of nostrums has never caused the world any loss, in this respect, in the past.

Mr. Hart's views of the impropriety of consultation with homœopathic practitioners will be received with some reservations by many American physicians, and were framed, of course, with a more distinct reference to the homœopathy of England than to that of America; but no question can be raised respecting the cogency and absolute conclusiveness of his argument that the code of professional ethics found its origin in deep-seated considerations of public welfare and is maintained by a regard for justice and humanity—not for class dignity alone. The ethics of the honorable practitioner are the sufferer's bulwark, and not a professional luxury!

PROFESSOR MICHEL PETER.

Michel Peter, the pupil and collaborator of Trousseau, the eminent clinician, author, translator, and pathologist, is dead. He had reached the age of Scriptural allotment, the acme of medical popularity, and was the strongest medical light of the age in France. The Journal de Medecin de Paris, feelingly remarks of him: "One of the most beautiful intellectualities of our time has passed away. As our master we deplore his loss to France and the medical profession." The same journal says of his forensic career:

His commencement was modest, as all the world knows—he sprang from the people, a mere printer's lad at first—flying to heights of genius, and through all grades of his career he never sacrificed his personal independence or his honest convictions. His was a master mind. He wielded a trenchant pen; was full of sharp incisive humor and *verve*, charged with biting sarcasm, yet devoid of hate. He was a virtuoso in the art of controversy, and few dared meet him on his own ground; he was generally let alone.

Medicine to Dr. Peter was a field for physiological experiment; his good common sense could not accommodate itself to more or less adventurous modern pet theories. A microbe or bacillus being the cause of such or such an affection was an indifferent matter to him; he sought to relieve his patients without wasting time over germ or other theories. He knew how much every new-fangled method or fad in medicine awakened the enthusiasm of its army of cranks, and every novelty met his steady defiance. He drove out the anti-rabic crowd with his sarcasm; he overwhelmed them with his railleries, and proved their fallacy by figures and facts.

The struggle against the Pasteurian school, once so powerful and intolerant, was the culminating point in the career of Peter. Our readers will certainly never forget this master of the art of saying hard things and saying them well, this medical logician and implacable satirical writer, a marvel of lucidity and good sense. He had the courage to stand up against all academic comers, when anyone who deemed Pasteur not a genius was held to be a *blasphemer*. But it was Peter who doubted the infallibility of the microbe pope, and re-established good healthy doctrines at French clinical schools.

Peter has been reproached for his peculiar sarcastic temperament that in controversy sometimes seemed to exceed the bounds of courtesy and good breeding. But this was a fault beyond control, since it was manifested only in the zeal for truth; he was ever a champion of truth and fact, of the right and just, and consequently abhorred fraud in every shape; his indignation was always righteous. Naturally, however, he was a kind, warm-hearted, sympathetic man; his

professional generosity a proverb. Always winning in manner, he never hated a foe; the bitterness of the polemical arena was forgotten the moment the debate was over. In his death France mourns the loss of her greatest clinical teacher.

THE DETROIT COLLEGE OF MEDICINE—WHY NOT A UNIVERSITY?

It must be very gratifying to the trustees of the Detroit College of Medicine in this season of depression and hard times, when so many institutions of collegiate and technical education are complaining of reduced attendance, to know that theirs has more than kept its own. There are, we learn, over 260 students now registered in the various classes for the session just opened—the freshman class having already ten more than had registered altogether last year, and there are probably (as usual) some dilatory ones yet to be heard from. This cannot be called a matter of chance, by any means. The Detroit College of Medicine is sparing no expense to keep abreast of the times, and to keep in sympathy with the growing scientific collaterals to the art and practice of medicine. There have been purchased, for instance, a number of microscopes and a very complete outfit of sterilizing and other apparatus for the thorough equipment of a bacteriological course. Histology has also been similarly cared for by the purchase of a number of new microscopes. There has also been very lately acquired by the College the large museum that was formerly held and accumulated under the care of the late Detroit Scientific Association. Its money value is probably not at once apparent, but we learn from Dr. E. C. Skinner, the custodian acting for the Scientific Association, that it cannot be short of $25,000. The museum is on first sight taken to be principally zoölogical in character, but there are very fair mineralogical and botanical collections contained in cabinets and boxes that have not yet been unpacked and that are awaiting opportunity for arrangement in their new quarters. This museum alone for teaching and reference purposes is almost invaluable, and will, in conjunction with the other material that the College has, make it possible to practically illustrate any branch of natural science in a way that could not have been attempted hitherto.

Departments in pharmacy, dental surgery, and veterinary medicine have been recently inaugurated and are doing successful work. There is a special laboratory for pharmaceutical work, special rooms for the dental clinics, and the vets have their own premises for their clinics outside the College building but not far distant.

Speaking of the facilities the Detroit College of Medicine now has for teaching other branches of science than those immediately connected with medicine, brings to our notice the sentiment that was broached at the last meeting of the alumni regarding the advisability of changing the name of their *alma mater* to "Detroit University." We are told that the College already possesses university powers by virtue of its charter, and that all that is necessary for accomplishing the change is a couple of dollars or so for registration of the change in title. If this is so, we do not think the trustees should need much time to consider what to do. There is now in the College building the Detroit College of Law, the membership of which have expressed themselves as perfectly willing to be merged by affiliation into the proposed Detroit University. We also learn that other bodies, such as the School of Art, Academy of Music, etc., would very eagerly do likewise as soon as the title is an accomplished fact. The prospect is certainly a very tempting one. Michigan is getting to be a very large State, in its own estimation at least, and enthusiasts in favor of the scheme say that there is room for two universities, especially when one of the two is located at the commercial capital. We are told that very little if any expense would be necessitated by these proffered affiliations, as each body would doubtless continue to meet in its present quarters. The erection of a building, however, would be aimed at, in which all departments could meet under one roof, and there are many of our wealthy citizens who could be found willing to give or bequeath sufficient to build and endow an institution with university powers who would be chary of giving to one limited to the teaching of medicine alone.

PSYCHISM OF THE SPHYGMOGRAPH.

At the International Congress for Psychic Research, which recently held its session at Chicago, Dr R. G. Purdon read an exhaustive paper on "Psychic Experiments with the Sphygmograph," in which he sought to prove that by this instrument it may be shown that the nervous system of one individual acts upon and influences that of another.

Ten years since Dr. Purdon made this alleged discovery; in June, 1881, he first noted the sphygmographic tracings of one person would on certain occasions resemble those of another. It was first observed in a woman at the time of the menstrual flux; under the very eyes of the observers her sphygmographic tracings gradually changed to those of another lady, a near relative, who at the time was at her side. During the interval between this and the next ensuing monthly no changes were observed, but at the height of the second period the same phenomenon occurred, the changes on this occasion being a simulacrum of the pulse of Dr. Purdon—"an exact likeness beyond doubt or mistake." On two subsequent occasions the same circumstance was observed, the left pulse being apparently the more impressionable.

During the autumn of the same year, in a German hospital, Dr. Purdon found many neurotic men who exhibited similar attractions or forced resemblances. These, as a rule, were rheumatics, generally speaking also chronic cases and unstable in vital and recuperative powers. These resemblances, moreover, often occurred among men in the same ward, but sometimes existed between the physician and his patients.

In January, 1882, Dr. Purdon had opportunity of making long and exhaustive research in the case of two neurotic prisoners under guard, and a woman who lived in a room separated from the prisoners' ward by a solid wall without any opening in it. He not only found the likeness to exist between the men themselves but also between each of the men and the woman, with whom they had never been brought into personal contact. He also found identities in his own case and all of the other three; and in addition to that, he and the two prisoners frequently heard distinct knockings when some of the best trace-likenesses were actually being written down by his instrument.

From the foregoing Dr. Purdon argued in favor of the belief "in the existence of a psychic ethereal organism and the larger life, the ether being the natural and legitimate form of expression through its physiological attributes, as it already is of impression when the muscular system, which is in correlation with form, gives way to psycho-physical modes of molecular activity."

There is one thing of particular interest in connection with the foregoing, namely: it opens up another phase of "suggestion." Further, it goes to show that the sphygmograph is not to be wholly relied upon in neurotic, hysteric, and kindred cases—that it is not at all times, as has been claimed, an instrument of precision. Moreover, it proves—what has been claimed by close observers—that the vagaries of circulation as evidenced by the pulse cannot be recorded by the tracings, or indeed fully appreciated in any way but by that intuition which is obtained by long, skilled experience and observation. And to a considerable degree the same objection holds good as to the thermometer, and other aids to diagnosis, when taken as isolated factors.

THE BICYCLE AS A CAUSE OF PROSTATITIS.

Dr. J. W. Irwin reported to the Louisville Clinical Society that within the last eighteen months five cases of prostatitis had come to his notice which could be traced directly to the pressure on the prostate gland by the saddle of the bicycle. Four of the subjects had passed the middle life, and one was in his teens.

In all, the phenomena presented were very similar in character. After riding the bicycle for a few hours, during the act of micturition a feeling as though the vesical end of the urethra was raw was experienced; then a full feeling behind the scrotum came on, which was unattended by pain. Inordinate and persistent erections of the penis, arising at short intervals and lasting three or four days, was the most unpleasant feature observed. The urethra during the act of micturition felt raw and tender under pressure; weight and some dull pain was felt in the testicles.

There was no discharge from the penis at first, and after two or three days a little moisture was observed oozing from the meatus; this discharge seemed to be very thin and colorless. The desire to void urine more frequently than normal was present while the trouble lasted.

The treatment advised was saline laxatives, and the free use of water internally; for the relief of troublesome erections, camphor monobromide in large doses. This, together with the removal of the cause, gave relief in from five to seven days.

CREMATION.

The Dominion Medical Monthly remarks: "Laws and medical inquests before cremation will detect crime better than the usages in earth burial. Should a patient in a trance be buried in earth 'alive' it is most terrible, while by cremation no suffering can occur.

"In olden times cremation was practiced; hence, since our ancestors did it, it cannot be described as a new custom."

Other advantages of cremation are: that it is cleaner; is more economical; prevents illness occurring from visits to graveyards in inclement weather; prevents the constant and expensive care of graves and tombstones; does not occupy ground area which is needed for the living; and does not endanger life through the poisoning of ground water. Finally, ashes can be preserved as a relic forever, while a decomposed body is disgusting.

BEE VIRUS FOR ACUTE RHEUMATISM.

In the Bulletin of the Entomological Division of the Department of Agriculture, Mr. John Wetherington, United States Consul at Malta, advocates the bee-sting as an infallible remedy for acute rheumatism, on the ground that it is universally employed by the country people of that island. It is, in fact, said to have been a common practice for generations past to resort to this remedy in all severe cases, the results being most favorable.

If this statement is true and the same virtue dwells in the virus of the sting of the active bee of America, surely some of our brethren in the rural districts should be able to give the remedy a practical test.

Book Notices.

THE RELIGION OF SCIENCE. By Paul Carus. Paper, 16mo; pp. 103; price, 25c. Chicago: The Open Court Publishing Co.

This little brochure is No. 1 of Volume I of the Religion of Science Library, which henceforth will be issued bi-monthly at the extraordinarily low price of $1.50 per year. The title of the library, as well as the title of the book, indicates the scope of both the work and the Open Court Publishing Co. Though it appears to be of purely theoretical importance, it nevertheless pursues an eminently practical aim which, briefly expressed, is to propound, develop, and establish a unity between religion and science. The present volume aims to sketch the isagogics of the Religion of Science—is intended to serve as an introduction to it to prevent misconceptions, and to impart general information concerning its interests and scope.

THE SCIENCE OF THOUGHT. By F. Max Muller. Paper; 16 mo; pp. 123. Chicago: The Open Court Publishing Co. Price, 25 cents.

This is No. 2 of Volume I of the "Religion of Science Library," issued bi-monthly by the Open Court Publishing Co. It embraces the three lectures by Prof. Muller before the Royal Institution in London, in March, 1887, and which at the time were, by captious critics, severely denounced as "revolutionary." Such criticism was undeserved, however, for the lectures are merely evolutionary and the natural outcome of that physiological and historical study of language which began with Leibniz, and in our day has reached its acme in the teachings of this author. Prof. Muller has no superior, if indeed any equals, in this branch of science, and philology is now so widely spread and ramified as to overshadow all the sciences.

Perusal of this work is only more convincing that the standing which Prof. Muller has won in the world of science and letters has been justly earned. Every word in the volume is fraught with weight and importance; every sentence is pregnant with interest, from Preface to Appendix. We trust this brochure may find a wide circle of readers, especially among the members of the medical profession.

THE HUMANITARIAN, 1893, Volume 3, No. 1. Sonnenschein & Co., Paternoster Square, London, E. C.

This magazine of eight pages comes to us a novelty in this particular field of literature. Its scope is such that it will find a place in any household. Although it is only in its thirteenth month, this journal has already been greeted on both sides of the Atlantic with such expressions of sympathy and encouragement that this the third volume offers materjal improvement both as to size and character of text. The present number contains, among other interesting articles: "Alchemy of Maternity;" "Mediæval Medicine;" "Anthropometrical Descriptions—A New Method of Determining Individual Identity;" "The Master of the Dark World;" "To the Third and Fourth Generation"—a serial story by Walter Besant. There are also pages devoted to reviews, and notes and comments; in the former we note a very careful analysis of drunkenness and of the character of so-called "temperance" literature, incidental upon a review of a volume on this subject by Geo. K. Wilson, M.B., C.M.

A NEW ILLUSTRATED DICTIONARY OF MEDICINE, BIOLOGY, AND COLLATERAL SCIENCES.

Dr. George M. Gould, already well known as the editor of two small medical dictionaries, has now about ready an unabridged, exhaustive work of the same class, upon which he and a corps of able assistants have been uninterruptedly engaged for several years.

The feature that will attract immediate attention is the large number of fine illustrations that have been included, many of which —as, for instance, the series of over fifty of the bacteria—have been drawn and engraved especially for the work. Every scientific-minded physician will also be glad to have defined several thousand commonly used terms in biology, chemistry, etc.

The chief point, however, upon which the editor relies for the success of his book, is the unique epitomization of old and new knowledge. It contains a far larger number of words than any other one-volume medical lexicon. It is a new book, not a revision of the older volume. The pronunciation, etymology, definition, illustration, and logical groupings of each word are given. There has never been such a gathering of new words from the living literature of the day. It is especially rich in tabular matter, a method of presentation that focuses, as it were, a whole subject so as to be understood at a glance.

The latest styles of spelling certain terms, as adopted by various scientific bodies and authorities, have all been included, as well as those words classed as obsolete by some editors but still used largely in the literature of to-day, and the omission of which in any work aiming to be complete would make it unreliable as an exhaustive work of reference.

The publishers, P. Blakiston, Son & Co., Philadelphia, announce that, notwithstanding the large outlay necessary to its production on such an elaborate plan, the price will be no higher than that of the usual medical text-book.

OUTLINES OF PRACTICAL HYGIENE—ADAPTED TO AMERICAN CONDITIONS. By G. Gilman Currier, M.D. Cloth, 8vo; pp. 468. E. B. Treat, New York.

Dr. Currier writes enthusiastically upon the value of hygienic precautions in the care and bringing-up of children, upon physical exercise, personal hygiene, food, and ventilation, and dwells with special care upon prevention of infection and kindred subjects, all of which are of interest and importance in connection with the preservation of health.

The author's researches have been crystallized in a style in which scientific accuracy and practical clearness are so happily blended that the work will, we feel sure, prove valuable to the student, the instructor, and the practitioner.

DR. THOMAS MORE MADDEN, one of the foremost gynæcologists of Europe, has prepared a text-book on Diseases Peculiar to Women, which will be published at once by the J. B. Lippincott Company. The work is more than usually important, from the fact that it contains the results of the author's wide experience and is embellished with numerous excellent sketches of cases under clinical observation made by the most eminent physicians in England and America.

Notes and News.

Epilepsy Cures.—

The prevalence of "sure cures" for this affliction seems to indicate either that the gullibility of the people is on the increase, or that the progress of rational medicine is so weak as to be unable to cope with this inane quackery. It is only when we contrast the "curability" of epilepsy with that of other diseases that the helplessness of medical practice in this disease is made painfully apparent.

Victims of epileptic quackery are subjects for pity rather than ridicule. The profession should not blame for vain attempts to brush aside this horrible phantasy when quackery so plausibly derides the failure of regular treatment, offers an apparent relief, or cunningly plants a new hope. If the tempter masquerades under the guise of legitimate practice, so much more is the disgrace to the profession.

The more recent of the many and much advertised "cures" differ from former therapeutic monstrosities, only perhaps in the air of respectability assumed by their sponsors. A letter from the "discoverer" of one of the infallible cures, slops over, so to speak, with a bewildering mass of incredible statements regarding the infallible virtues of the remedy from the use of which so many hundreds of cases "of all sorts of epilepsy have been cured!" We are reminded of the wonderful remedies contained in a little medical work published as late as 1819, and by the redoubtable Lewis Merlin. The recipes were "discovered after much research and experience by the most skillful physician in Europe, employed with the greatest success, and are now published for the benefit of humanity."

The following are quoted from this "precious volume" by the Virginia Medical Monthly:

For the Cure of the Epilepsy.—Take some of the afterbirth of a woman, wash and pound it well, after mix it with rye flour, in order to make bread with it, and bake it in an oven; the patient must take the weight of half an ounce of it, to eat, morning and evening, every first day of the first quarter of the moon; take likewise some tobacco, pound it, and after make of it a head-band for the patient, on the same days.

Against the Epilepsy.—As soon as a child is born, and before it take anything else, if you make it swallow half a scruple of coral in powder, mixed with nurse's milk, it is given for certain, that the child will never be afflicted with epilepsy.

Another Remedy for the Same.—Take some wheat flour, that you will mix with dew, gathered on the morning of St. John's day; make of it a cake, which being baked, give it to the patient, and he shall get well.

Another for the Same.—If you cut and open, before the full moon, the young ones of the swallows of the first nest, you will find in their ventricle two small stones, one of which is all of one color, and the other of several colors; before they touch the ground, shut them up in a piece of goat or deer skin, and tie them on the arm and neck; they will cure the patient of the epilepsy, according to the testimony of an Italian doctor, who assures, having made the experiment with it.

To Know the Epilepsy.—To know the epilepsy, burn some deer horns, and the person who is subject to it will fall, but the patient must be surrounded with a blanket or quilt, from head to foot in a manner of a pavilion, in order that the smoke does not get lost.

Erroneous Ideas regarding Ptomaines.—

A case recently tried, and an inquest held, brought out assertions regarding ptomaines which are almost as erroneous as the announcement in a popular weekly review that "ptomaines are bacteria." For obvious reasons the erroneous statements made in connection with this subject are extremely dangerous.

We hear it stated sometimes that all ptomaines are destroyed by such an amount of heat as is employed in the ordinary process of cooking. This might be so if it were the case that ptomaines were bacteria; but if it were so, cases of food poisoning would be unheard of. Anyone acquainted with the chemistry of these toxines knows how stable and resistant against heat almost all, and especially the more important, ptomaines are; and that, therefore, there can be no safety in boiling so far as the destruction of these bodies is concerned. Moreover, in the separation of many of these substances, heat is constantly employed without the slightest effect on their toxic properties. If there be death

in the pot, generally speaking no amount of boiling will prevent it.

Another statement which invites unqualified dissent is that, by boiling, the poison will be distilled out and so much diluted by the water used as to become innocuous. Most ptomaines—there are exceptions—are very soluble in water, but it is absurd to assume that if hidden in the centre of a piece of meat they would diffuse through the tissues and be dissolved and diluted.

Lastly, the fact that of several people who have partaken of a tainted article of food only one has suffered has been used as an argument against the toxic nature of such food in any particular case. Can anything be more erroneous? The poison may be extremely localized in a particular piece of meat, the rest being free from it; and when we have to deal with a number of fish packed in the same tin, some only may be tainted.

The prevention of food poisoning is a problem of extreme difficulty. In the mean time, however, we must remain fully alive to all the results of accurate chemical and physiological observations, and not lull ourselves into a feeling of safety while we may be face to face with death, all the more deplorable as it is unforeseen and accidental, though fortunately rare.—*British Medical Journal.*

The Keeley Cure for the Opium Habit.—

Many nostrums have been brought out from time to time for the cure of the opium as well as the alcohol habit, but all, when submitted to chemical analysis, proved to be merely preparations of the same baneful drug, usually colorless solutions of morphine. By such fraud the patient is led for a time to believe he is escaping from the thraldom of the drug, when in fact he is being embraced more firmly in its clutches.

Only a few years ago a so-called "gold cure" for the opium habit was analyzed by Dr. Lyons, who found that the solution contained little aside from atropine and antimony.

The following letter regarding the Keeley "cure" appeared some time since in the New York Sun, over the signature of Dr. A. R. Stephens, of Herrickville, Pa.:

"Having read all about the Keeley cure, I thought to try it. My patient had been using morphine hypodermatically to the extent of 15 to 20 grains daily for eight or ten years. I wrote to Dr. Keeley at Dwight, Ill., who referred me to his agent at Philadelphia. The latter asserted it would be no trouble to cure the patient in two or three weeks, and that the price of the remedy would be '$10 per pair of bottles, which contain about one-half pint of chloride of gold.' He thought three pairs would cure without fail.

"We followed the directions until six pairs had been used without any benefit. I then had the remedy submitted to chemical analysis and found it to contain gentian and cinchona with a trace of opium, and without gold in any shape, unless represented in the price.

"I consider the remedy—taking that sent me as a fair sample—a perfect humbug. I have kept a sample of it, which I am ready to exhibit to any chemist or medical man at any time."

Physicians in Japan.—

An ex-attaché writes: "Perhaps the most charming manner of compensating physicians for their care and attention is that which is customary among the natives of Japan. Physicians do not charge for their services, but on the contrary decline to name an amount, and protest against any idea of remuneration. Patients on their side are too proud to accept such services free, and send to the physician, not as a fee but more as a friendly gift or token of gratitude, a sum of money proportionate to the means of the giver, with some piece of silk, bronze, or lacquer work—the idea being that medical attendance is by far of too important and elevated a character to be desecrated by barter for filthy lucre."

What a pity that our boasted Western civilization, with all its commonplace vulgarity and lack of delicacy, will not admit of adoption of such a charming method of intercourse between the medical man and his patients!

An Indian Doctor in London.—

An interesting ceremony took place in the Temple Church, London, a few weeks since,

when the infant son of Dr. Edward Nundy, barrister-at-law, of the Inner Temple, and resident medical officer of the Royal South London Dispensary, was baptized by Dean Vaughan, the master of the Temple. Dr. Nundy, who is married to an English lady, is a son of the late Rev. Gopee Nath Nundy, a well known native Indian missionary of Bengal, and who, in the words of Sir William Muir, one of the godfathers of the infant, "held his faith as a convert to Christianity while his life was threatened in the Mutiny of 1857 if he did not recant, and who stood firmly by and supported one of our English officers in the Khusru Bagh at Allahabad under similar circumstances—heroic conduct worthy of our faith." The other godfather was Sir Edwin Arnold, and Lady Flower acted as proxy for the godmother, Miss Mary Nundy, while the Rev. Arthur Allwork, vicar of St. Paul's, Southwark, did the same for Sir William Muir, who was unavoidably absent.

A Lady with a Horse Mane.—

Under this name a young girl, aged 20, is now traveling about the world, showing to the public how richly nature has endowed her with the ornament of hair. She has, besides a rich *chevelure*, a mane growing out of the spine. The hair of this mane is of the same dark-brown color as that of the head, and reaches a length of about ten inches. The place where the hair grows extends downward for 8 inches, from a point 3 inches below the hair of the head, in the middle of the spine. Not long ago this lady with the mane was presented to the Anthropological Society of Berlin, and Virchow, to her great astonishment, found that it was a pathological case, for behind the mane there was a *spina bifida occulta*. Several cases have been described during the last two years of hypertrichosis of some region of the spine, connected with spina bifida occulta. —*British Medical Journal.*

Against Patent Medicines.—

In the report of the German Apothecaries' Association, published in the Apotheker Zeitung of Sept. 6th, it is stated:

"The abusive taking-out of patents upon medicines and their mode of preparation, increases in a very reprehensible manner. This Association has already repeatedly taken steps against the granting of such patents, by making protest to the proper authorities, and will not lose sight of the matter when a revision of the patent laws is under consideration. The Association will then do its best to have a proviso in such law to the effect that all articles upon which a patent has been granted, either for process or finished product, shall forfeit the protection of the patent as soon as said articles are used for the purpose of treating disease."

Warren Bey.—

Dr. Edward Warren, who recently died in Paris, had a career of more than ordinary interest. He was Acting Surgeon-General of the Confederacy during the late war, and was with Lee's army during the Peninsular campaign. After the surrender he went abroad and became Surgeon-General to the Army of Egypt, where he was honored with the title Bey. Subsequently, having won the friendship of Charcot, the latter induced Dr. Warren to settle in Paris, where he speedily obtained a large practice among distinguished people and ultimately received the decoration of the cross of the Legion of Honor.

"A Good Location."—

Under this caption the Texas Sanitarian informs its readers of an opening "for a competent physician desirous of a practice worth $1,000 or $1,200 a year in a *most healthful town* in Southwestern Texas!"

It strikes us the average medical man is not looking for that kind of town.

In the Quiz Class.—

Professor of Hygiene and State Medicine: "What do you understand, Mr. Sporrer, by preventive medicine? Give an illustration."

Mr. Uppie T. Sporrer, of Texas: "P-p-p-pur-ventive med'cin is *er-rer* med'cin what pur-*vents*, like when un giv's lead 'n opium pills f-fur dier-*ree!*"—*Texas Medical Journal.*

More Endowment for McGill.—

Sir Donald A. Smith, Chancellor of the University, has donated $100,000 to endow the chair of Pathology and Public Hygiene in this famous Canadian institution.

Therapeutic Brevities.

Operation for Umbilical Hernia on the Newborn Child.—Berger successfully operated on a female child thirty hours after birth. The infant was born strong, breathing well. The umbilical hernia was of the size of a small hen's-egg, and covered by the membranes of the cord. There was a distinct neck or pedicle as thick as a forefinger, made up of integument alone, which was united to the membranes by a deep groove. The lower part of the hernia was reducible, and the sac was there transparent. Coils of small intestine showed through it; they could all be pushed back into the abdomen. The upper part was irreducible and in close relation with the vessels of the cord. After birth the hernia and abdomen were well washed and dressed with iodoform. On the next day the hernial sac was opened and the small intestine reduced. The irreducible portion consisted of the cæcum, the appendix, and about one-third of the large intestine, all intimately adherent to the membranes of the cord. A layer of these membranes had to be detached and reduced, together with the bowel. This manœuvre could not be done until a free incision had been made along the median line, as in abdominal section. The sac was excised. The peritoneum, the aponeurosis, and the skin were separately sutured. The operation lasted an hour and a quarter. The sutures were removed on the tenth day; recovery was complete at the end of a fortnight.—*Nouvelles Archives d' Obstét. et de Gynécologie.*

Futility of Local Medicinal Treatment of "Catarrh."—The fact is, there is not a drug in the whole armamentarium of medicine that has any action at all specific in catarrh; disinfection, antisepsis, cleanliness, and solubility of mucus, is the utter limit of their usefulness so far as curative action is concerned. An enlarged state of the tissues of the turbinated bones and the mucous membrane cannot be made smaller by any direct medicaments, nor can a wasted membrane be built anew by such methods. If anything happens of a curative nature, it is due to some change in the environment of the patient—as a climate in which he is not liable to sudden changes, or some such means by which the general conditions are improved. The tissues of the nose can be dealt with by caustics, by the galvano-cautery, the drill, snare, or knife; the septum (cartilage) must never be interfered with by caustics or the galvano-cautery. In the hands of the surgeon, hypertrophic rhinitis is nearly always amenable to treatment; atrophy is often beyond all his skill. Keep clear of the favorite prescription of the quack, which combines those drugs that induce quick contraction of the mucous membrane and temporary relief in hypertrophy, to wit: cocaine and strong solutions of thymol, menthol, and carbolic acid. The reaction following renders the original condition worse, and such treatment leads eventually to severer forms of atrophy.—*Omaha Clinic.*

Injections of Iodoform in Goitre.—Kapper uses a solution containing one part of iodoform and seven parts each of ether and olive oil, which is injected into the goître after previous disinfection of the skin. The trocar of the syringe is disinfected, and is then plunged to the depth of two to three centimeters into the tumor, and the patient is told to swallow in order to ascertain whether the cannula takes part in the movements of deglutition, or whether it has not been inserted deeply enough. Immediately the solution is injected the trocar is rapidly withdrawn and the orifice of the puncture closed by means of a piece of diachylon plaster. When the goître is very large, he injects as much as six grammes of the solution at one sitting, in four different parts. The injections were repeated at intervals of four to six days, sometimes on several consecutive days. Local reaction was always feeble. Eight men and six women have undergone the treatment. After ten injections in the course of two months the circumference of the neck was diminished by six centimeters at least, and after another interval of two months there was a diminution of eight or ten centimeters. Besides this the discomforts felt by the patients were sensibly attenuated. Six months after cessation of the treatment the improvement was maintained.—*Gazette de Hôpital.*

Therapeutic Effects of Direct Electrization of the Stomach.—Max Einhorn (Deut. Med. Woch., 1893, Nos. 34 and 35) concludes a study of this subject: (1) Direct faradization. Here details of some twenty-eight cases are given, including hyperacidity with dilatation, gastroxynsis, chronic gastric catarrh, obstinate gastralgia, etc. The chemistry of digestion was always investigated. In all cases, with a single exception, there was a diminution, or rather disappearance, of the symptoms under this treatment, but in five other cases of obstinate gastralgia the improvement was so small that

galvanism was tried. The faradic current used was only strong enough to produce contraction of the abdominal muscles, and the sitting lasted ten minutes. (2) Direct galvanization. Here seven cases are recorded. The cases of obstinate gastralgia referred to above were much benefited. The author concludes that direct gastro-faradization is useful in most chronic diseases of the stomach, except cancer; that its effect is very evident and comparatively rapid in non-obstructive gastric dilatation, and also in cases of relaxation of the cardia or pylorus; and that direct galvanization gives good results in obstinate gastralgia rebellious to other treatment.—*British Medical Journal.*

Pichi in Genito-Urinary Diseases.—Friedländer prepared an extract from the plant, *Fabiana imbricata,* and found it to contain a resinous acid, tannin, and an alkaloid. Experiments on animals were not completed, but after proving its innocuousness the author administered a teaspoonful of the extract three times daily to six patients suffering from affections such as cystitis, prostatitis, neuroses, acute gonorrhœa, epididymitis, and balanitis, diseases for which it has hitherto been the practice to administer internal remedies. The general effect produced was good, sometimes to a surprising extent, and details of each case are given, showing especially its power in improving such conditions as frequent micturition, tenesmus with passage of blood and pus, pains in the lumbar region, etc. The extract, having a pleasant bitter though aromatic taste, increases the appetite, and for this reason alone is preferable to copaiba and sandalwood oil, while at the same time the remote action is at least equally satisfactory.—*Therapeutische Monatshefte.*

Fallacies and Traditions.—These are hard to live down. It is a popular idea that it is better for children to have the so-called children's diseases and be over with them; it is also claimed that when adults have diseases which usually occur during childhood the attacks are much more severe than if these had come to them as children. These statements have always been accepted as facts and passed down from parent to child; but they are not borne out by modern ideas of preventive medicine. In all cases try to avoid disease of every form; keep children from all children's diseases. These ailments not only go hard with many, but the after-effects in some cases never disappear.—*Health Magazine.*

An Effective Depilatory.—Butte (Monatshefte für Practische Dermatologie, 1893) recommends iodine collodium, which for three or four consecutive days is spread rather thickly upon the respective spots. When the collodium skin is removed the hairs will be found adhering to the under side.

Especially adapted is said to be iodine collodium of the following composition:

Alcohol	12.0
Iodine	0.75
Collodium	35.0
Oil turpentine	1.5
Castor oil	2.0

—*Medicin. Monatschrift.*

Duboisine.—E. Mendel recommends duboisine in paralysis agitans, not as a remedy but as a great palliative. After hypodermatic injection of two or three decimilligrammes of the drug, the tremor ceases for a period of three or four hours; sleep also is much improved thereby, and muscular rigidity increased. The remedy may be used safely for a long time, as there is no danger of formation of a drug-habit.—*Neurolog. Centralblatt.*

Glycerin Enemata in Labor.—Dr. Anacker, of Chateau-Salins, strongly recommends the practice of administering, at the beginning of labor, a glycerin suppository or a few grammes of pure glycerin. He finds that the uterine contractions are thus greatly strengthened, and that labor proceeds with considerable rapidity. Glycerin suppositories he finds less efficacious than glycerin employed pure.—*Hospital Gazette.*

Hydrastis for Night-Sweats.—Olzewski-Krakau has employed fluid extract golden seal in doses of 25 to 30 drops two or three times daily, in the night-sweats of pneumonia, intermittent fever, tuberculosis, etc., with most happy results. Especially in phthisis were the effects admirable—but only in two patients, however, out of ninety-three, the remedy in the others unfortunately causing vomiting.—*Apotheker-Zeitung.*

Tobacco Odors on the Breath.—To remove the smell of tobacco from the mouth or breath, Grahame advises bromo-chloral, a few drops in a glass of water, with which the mouth is to be well rinsed.—*Deutsch-Americanische Apotheker-Zeitung.*

Medical Progress.

THE LIMIT OF HUMAN LIFE, AND HOW TO LIVE LONG.—By common consent, human life has been limited to three score years and ten since the time of King Solomon, with a small minority surpassing that limit and a few who have lived a hundred years or more; and with conditions of life unchanged the period would doubtless remain the same. The conditions of life, however, have already changed. The influence of hygiene and measures of sanitation practiced since the beginning of the last half-century, together with the wonderful discoveries and inventions employed for the comfort and protection of mankind generally, have unquestionably raised the lifetime of a generation several years. Moreover, this rising average must continue while popular education of the masses is becoming a universal policy and the laws of health are laid open to the people by the secular press everywhere; and now even the octogenarian may hope to spin out a few more years.

To man, life has ever been a matter of deepest concern, and speculation has never ceased to pry into its mysteries, but the art of living seems to have been left to the promptings of appetite alone. Now, however, dietetics has become a science, chemistry has revealed the properties and qualities of food, and physiology has clearly defined the functions of nutrition; and these have made possible the enjoyment of health and exemption from diseases leading to death.

Viewing the periods of life from childhood to old age, we observe remarkable changes. The child nourishes with avidity in compliance with nature's demand for material to build up the organism to full maturity of manhood, and the process of digestion is vigorous and complete. If food is taken in excess or of injurious quality, it passes off readily up or down as a harmless incumbrance; but this immunity is gradually diminished as growth proceeds until, finally, the acme of life is reached at the age of 45, when a new curriculum begins.

Heretofore pabulum has necessarily been expended for the purpose of development, as well as for ordinary waste incident to any period, but henceforth only the latter calls for a supply, inasmuch as the structure is now complete. The architect has finished the job, and nothing more can be added without impairing its value or thwarting the design.

For some years yet self-indulgence may be tolerated, but always with more or less risk. If the habit of taking nutriment in quantities adapted to early life is continued, the surplus left after the loss by waste is supplied must either be cast off with much greater difficulty as age advances, or deposited as fat among the tissues to impair their functions. This is inevitable, for as manhood wanes imperceptibly into old age all the energies must participate in the decline, though failure may not be obvious at any particular time.

For some years past, reported deaths from "heart failure" have become frequent and fashionable among practicing physicians, and perhaps the reports may have been true, but not the whole truth, for it is probable that, in nine cases out of ten, the heart failure was secondary and brought on by an ineffectual effort of the stomach or alimentary tract to cast off indigestible matter clogging the way.

It would be well for physicians to recognize the significance of that wonderful aggregation of nerve cells constituting the solar and semilunar plexuses behind and contiguous to the stomach and bowels. They are the power houses sending forth energy to run the whole machinery of digestion; and when that power fails, the main link binding the whole fabric together is broken, and then of course the heart, as well as other organs, *must* fail. Hence the importance of regulating diet as age advances to serve nutrition according to the power of digestion remaining.

In earlier life, when nitrogenous elements were required for the construction of solid tissues to serve the purposes of growth, meat was freely consumed and easily digested, as it contains more of that element than anything else available; but growth having ceased, there is now no longer a call for more than a small amount to supply the deficiency occasioned by ordinary waste. We say a small amount because it is well known that nitrogen once incorporated in the solid tissues holds its position for a considerable length of time, and is with difficulty eliminated from the blood when circulating in noxious forms. Therefore little meat is required, except for laborers who exhaust their muscles. From all this we may safely aver that persons on the down grade of life who fail to modify their habit of diet according to the rule suggested, will be constantly liable to attacks of disease—even Bright's disease, that most miserable misnomer. If statistics could be kept showing the real causes of all deaths occurring between the ages of 45 and 75, the result in all probability would prove that more than half fall

victims to disease engendered by gastric indulgence.

The habit of constipation is another serious obstacle in the way of long life. Its progress is slow and so insidious as to beguile the sufferer into the belief that it is not pernicious or worthy of attention; and so apprehension is lulled, while the foundation of some fatal chronic disease involving important organs is being laid. Its general prevalence is traceable to more than one cause; the principal one, however, is the habit of procrastinating the daily evacuations of the bowels, which usually begins in early life, though the habit may be contracted at any age. According to the rules of decency, opportuntites are not always present when inclination prompts, and the act of defecation is therefore deferred to a more convenient time. This procrastination becomes a permanent habit, and chronic constipation must ensue. The malady seems to be peculiar to the human race as a result of these circumstances, while all other animals, unrestrained by social ethics, drop their ordure at a moment's warning, wherever they may be; and doubtless even these inferior animals would be afflicted with constipation also, were they subjected to similar restraints.

The morbid influence of habitual constipation on an organism otherwise healthy, is an interesting study, but easily understood. The fecal mass having traveled down through the long digestive conduit, finally subsides into the colon and rectum in a complete state of decomposition—a mass of ptomaines to be seized by the active absorbents of these receptacles and thrown back into the general circulation, poisoning tissues wherever they go and defying the liver, kidneys, or any other emunctory to cast them out of the system. Congestions, inflammations, abscesses, and all the catalogue of pathological complications are liable to ensue. Most likely a large majority of chronic diseases take their origin from this cause.

When troubled with constipation it is usual to resort to purgatives, which afford temporary relief, but usually have a tendency to confirm the disease. Enemata are sometimes used with no better results, for besides being a bungling remedy they have no permanent influence in overcoming the habit. Bread made of unbolted rye or wheat meal is an excellent remedy, but not being in common use few patients can be sure of getting it regularly, especially if engaged in active pursuits as many are. Before the habit is firmly established, eating desserts at dinner every day is apt to afford some relief, and if there is no habit of constipation it may act as a preventive. In early life the writer of this adopted a pill containing rhubarb 2 grains, aloes 1 grain, jalap 1 grain, ipecac ½ grain, Castile soap ½ grain, sulph. strychnia $\frac{1}{40}$ grain, to be taken every night as a regular habit, and to be followed every morning by a copious draught of cold water. The pill without the water was not strong enough to thoroughly evacuate the bowels at one motion, but with the water the effect was invariably produced without purging. And since that time, much more than fifty years ago, the habit of taking one of these pills every night and a tumbler of cold water in the morning has seldom been neglected. The pill has no special claim to superiority over others, its only advantage, if any, being attributed to accuracy of combination and dosage, and, perhaps, the small amount of strychnia.

Observing the gentle and never-failing action of this pill in relieving constipation, it soon became a standing remedy for hæmorrhoids, on the theory that constipation is one of the chief causes of that troublesome disease; and now, after the experience of a lifetime, not a single case of failure is remembered, nor does it seem probable that it can fail when we take into consideration the physiology of digestion.

Allusion has already been made to the decline of vital energy as age advances, and among all the special forces of the organism peristalsis of the alimentary tract is the most appreciable example. When that function fails, constipation is inevitable, and when that habit is fairly established we may look out for some organic or constitutional disease to jeopardize the expectation of long life. But if any harmless means can be improvised to accelerate the retarded peristaltic movement merely up to the speed of normal action and keep it so without actual purging, then all the coöperative powers of digestion will certainly conform to the altered condition, and health will be maintained.

To suggest the methodical use of cold water as a beverage in the absence of thirst, as a means of augmenting the chances of longevity, might seem to render one liable to be called a crank, if not a lunatic, but nevertheless the idea claims a physiological origin and is well supported by experience. Solid and dry as the human body appears, water constitutes more than three fourths of its bulk, and all the functions of life are really carried on in a water-bath. And although the sense of thirst may be trusted to call for a draught of cold water when required, that offers no reason why it may not be beneficial

in the absence of thirst. Many persons drink no water between meals, and, as a majority of the population are more or less sedentary and not provoked to thirst by exercise or difficult digestion, abstinence may be regarded as a general rule, unless we include the swilling of beer and other useless stimulants. In the latter stage of digestion, when comminution of the mass is incomplete, it is much facilitated by a moderate draught of water, which disintegrates and dissolves it, fitting it for emulgence and preparing it for assimilation. Hence we may infer that the habit of drinking water, at least once between meals, contributes to health, and indicates the fact that those who visit health resorts at springs for the purpose of imbibing their waters might profit by staying at home and drinking more water and less whiskey. Water is the universal solvent of nature and a chief agent in all transformations of matter and combinations of mind. When taken into an empty stomach it soon begins to pass out through the tissues by an osmotic process into the circulation to liquefy effete solids, that they may float away to excretory organs to be cast out. This benign influence, favoring healthy retrogression, is always more or less thwarted when it is combined with stimulants, which tend to the suspension of that important process.

Life is a continuous warfare, a struggle with natural forces constantly tending to dissolution, and every passing year leaves it with diminished power to resist unceasing assaults until death terminates the contest; nor is it less true that recuperation from injury resulting from the conflict is weakened by the progress of age. Diseases of manhood come and go with little apprehension of danger or death, while the same seldom fail to prostrate an aged man and imperil his life. Hence the danger of any kind of self-indulgence or exposure when the signs of age are upon us. Truly does it behoove every young man, while buoyant with hope and unfaltering energy, with a constitution able to expel the onslaughts of disease, to patiently delve and lay up under lock and key the wherewithal to tide him over the last stage of human existence with a full sense of personal independence; for under such circumstances the few years of an octogenarian with reasonable health might prove to be the most interesting part of his life.—R. H. Dalton, M.D., St. Louis, Mo., in *Journal of the American Medical Association.*

Organic Extracts.—This is the age of "organic extracts." Thyroid feeding is already a recognized mode of treatment for certain conditions, and the marvellous success which undoubtedly attends this procedure has led to its imitation by the administration of preparations from other organs, a course of action which has nothing like the physiological justification which the administration of the thyroid gland possesses. Amongst such substances is "cerebrine," prepared presumably from cerebral substance, and brought into notice by Dr. W. A. Hammond in an article in the New York Medical Journal. It was claimed that this substance administered in 5-minim doses caused an increase in the pulse rate, accompanied by a feeling of distension of the head and flushing. A feeling of exhilaration was also said to be experienced, lasting for several hours, and if the dose was administered about bedtime wakefulness was the alleged result. The urine was also said to be greater in quantity than normally, and the peristaltic action of the intestines increased in force and frequency, whilst the general muscular strength and endurance were much augmented. Visual power was likewise said to be strengthened, and the appetite and digestion were both increased. Such were the claims put forward on behalf of Dr. Hammond's "cerebrine." Similar qualities were ascribed to another preparation, which was named "cerebrin," and it was of course inevitable that a stringent examination of substances for which such importance was claimed would sooner or later be made by some unprejudiced person. Such an examination has now been made by Dr. Stockwell of Detroit, and its result is given to the world in a recent number of the Philadelphia Medical News. The method of trial was as follows: On three different days the observer himself, a medical friend, and another friend, the manager of a large manufacturing establishment, obtained twelve men for experimental purposes. These men voluntarily submitted to the ordeal, only being assured that no harm would come to them, but not being informed of the nature of the fluid which was injected or of the symptoms which, from previous description, might reasonably be expected. After each administration the pulse, temperature, etc., were recorded hourly, and in the interval the subjects of the trial went about their work, which, in most of the cases, was heavy. The fluids employed were: (1) "cerebrine" in the original packages; (2) "cerebrin," also in the original packages; and (3) a control mixture composed of 38 parts of borax, 42 parts of glycerin, and 40 parts of water. The thermometers used had Kew certificates, and a new hypodermic syringe was employed

for each fluid. For trial with each solution four men were selected, and the pulse, respiration and temperature were of course observed before the administration of any of the fluids. With reference to the results, it is stated that "cerebrine" gave a little variation from "cerebrin," and the third fluid (borax and glycerin) was practically as effective as the preceding two. There was a slight variation in the pulse in some of the cases on the first day, to be naturally accounted for, probably, by a certain amount of trepidation and nervousness, for on the second day there was considerably less variation, the ordeal naturally being not so trying because better understood. As regards the temperature, in no instance was the average increased to the amount of 0.07 of a degree, nor were the statements made by Dr. Hammond as to the other symptoms borne out. No exhilaration or flushing or wakefulness was complained of, nor was there any evidence of increased power of vision or of strengthened muscle; and the disappointing conclusion is come to that "cerebrine," "cerebrin," and a solution of borax in glycerin and water are all equally efficacious, or rather equally inert for good or evil.

The only possible objection which we could critically urge against these observations is that the age of the patients tried was too low. It is claimed for the substances named that their greatest efficacy is obtained in elderly patients, in whom degeneration is beginning to manifest itself; but even this—almost the only point on which exception could be taken to the conclusions—is a trivial matter and does not in any way invalidate the issues. It is the recognized rule in medicine to "prove all things; hold fast that which is good." We venture to think that "cerebrin" and "cerebrine" are not amongst the things which the medical profession is likely to hold fast, and we congratulate Dr. Stockwell on his careful observations, which would seem to correctly appraise the worth of these substances as remedies.—*The Lancet* (London).

Syringomyelia Arthropathies.—In Le Progrès Médical for April 29, 1893, Charcot reviews the various arthropathies dependent upon syringomyelia, and concludes as regards the pathological anatomy of syringomyelia that it is characterized essentially by the formation of a cavity with gliomatous walls on the gray substance of the spinal cord. This lesion, which most particularly develops at the level of the cervical enlargement, invades step by step the anterior and posterior forms of the gray substance (poliomyelitic symptoms), finally destroying the white columns, lateral or posterior (leukomyelitic symptoms). The most common clinical form of the disease is the progressive muscular atrophy, beginning at the thenar and hypothenar eminences with fibrillar tremors, which are the first to attract attention. This atrophy is generally accompanied by sensation troubles consisting mainly in more or less complete loss of sensibility to pain, heat and cold, the tactile sense and the muscular sense being preserved.

A third group of symptoms corresponds to a series of cutaneous or subcutaneous lesions, bony or articular, which are designated under the general name of trophic troubles; they include bullous eruptions, œdemas, spontaneous fractures, and arthropathies. The latter are vegetating arthropathies, quite comparable to those which are seen in the hypertrophic form of tabetic articular lesions, and generally develop spontaneously, without any traumatic history—the onset is abrupt, at times *fondrovant*, without pain, without fever; the articulation and periarticular soft parts rapidly tumefy, the ligaments relax, the joint becomes loose, and dislocation occurs; on moving the joint, crepitation may be elicited; the patients do not suffer; the articulations may be moved, palpated, dislocated, without producing any discomfort.

Contrary to the tabetic arthropathies, which most frequently are situated in the lower limbs (76 per cent., according to Schrotter), syringomyelic arthropathies affect generally the articulations of the upper limbs (wrist, elbow, shoulder). At times they appear precisely in advance of the disease, but ordinarily they are preceded or accompanied by other syringomyelic symptoms, trophic cutaneous troubles, thermo-analgesia, amyelotrophy, etc.

Of these syringomyelic arthropathies there are two varieties: the *atrophic* form, which is rare, and the *hypertrophic* form, which is most common. In the latter the ligaments and the capsules are elongated or destroyed, and the bony extremities become movable to excess and loose and rattling. The articular surfaces, eroded in places, become deformed either because of partial fractures that result, or because of the bony vegetations that surround them.—*Philadelphia Medical and Surgical Reporter.*

Conception during the Puerperal Period.—Brasseur quotes the case of a woman, aged 22, who was delivered on July

4, 1892, of her first child. July 8th she indulged in sexual intercourse, and was delivered, March 10, 1893, of a child measuring 52 centimeters in length and weighing 3,550 grammes. Calculating from the date of coitus, the second pregnancy lasted 243 days, that is, twenty-seven less than the normal.

Ovulation must have existed in the woman on the fourth day after the delivery, and it was necessarily quite independent of menstruation. Koenig draws from the foregoing the following deductions:

1. A gestation period of 243 days after a fecundating coitus may produce a viable child.

2. The spermatozoa can live in the lochial secretions.

3. The functional activity of the ovaries is not completely suspended during pregnancy. The Graäfian follicles so open that they may burst a very short time after delivery.

4. Ovulation and menstruation may occur independently of each other.

5. Among vigorous women during the period immediately following confinement, the uterine mucous membrane may undergo a rapid regeneration which renders possible the implantation of a fecundated ovule immediately after delivery.—*Gazette Médicale de Liége.*

"Cerebrine" and "Cerebrin."—Dr. G. A. Stockwell contributes an interesting study of these two substances to the Medical News, August 26th. The following is a summary of his observations:

As to all three experiments, the claims made by Dr. Hammond were in no instance borne out, either as to pulse, respiration and temperature, exhilaration, flushing, wakefulness, increased quantity of urine, expulsive force of bladder and peristalsis of the intestines, increased muscular strength, increased power of vision, or increased appetite and digestion.

In addition to all this, I myself ingested, on various occasions, doses varying from 5 minims to ½ ounce of both "Cerebrine" (Hammond) and "Cerebrin" (Parke, Davis & Co.), without any appreciable effect; and so far as the assertion that a dose of "Cerebrine" (Hammond) induces insomnia is concerned, I am obliged to dissent. One-half ounce ingested at 8.30 P.M. did not in the least influence sleep, which was profound an hour and a half later.

There is but one conclusion to be formed, viz., that "Cerebrine" (Hammond), "Cerebrin" (Parke, Davis & Co.) so-called, and a solution of borax in glycerin and water, are equally efficacious—or rather, equally inert for good or evil.—*Ohio Medical Journal.*

Benefit to Ear Patients from Nasal Treatment.—Acute suppurative inflammation of the middle ear, if not treated, has a tendency to become chronic, the tendency increasing with the age of the patient.

Chronic suppuration of the middle ear rarely heals without ear treatment. Neither acute nor chronic purulent otitis is influenced by nasal treatment, but the liability to relapses after their cure is decidedly lessened by the removal of naso-pharyngeal anomalies.

Acute catarrh of the middle ear will generally terminate in complete recovery under aural treatment, and sometimes even without it, provided there are no persistent nasal or pharyngeal lesions. But when these are present the disease is more likely to become chronic in spite of aural treatment, and in many cases can either not be cured, or if improved will speedily relapse unless the normal state of the nose and throat is restored.

Proliferating or adhesive disease of the middle ear is the consequence of retro-nasal catarrh, and its course is determined by the course of the disorder causing it.—Dr. H. Gradle in *Journal of the American Medical Association.*

Chronic Malaria.—Dr. J. W. Pruitt, in the Chicago Medical Times, calls attention to distilled extract of maize-husk in the treatment of chronic diseases of malarial origin;

"Take of corn-husks well dried and free from stems and mildew, 4 pounds; water, 16 gallons; place in a still of 20 gallons' capacity, and draw off 10 gallons of distillate. The extract is clear and transparent, resembling in odor and taste boiled green corn. In order to preserve, 1 ounce of alcohol and ½ ounce of glycerin are added to sufficient of the extract to make 1 pint. The dose is from 1 to 2 teaspoonfuls every two or three hours. Of no particular value in acute malarial conditions, yet in chronic intermittent fever it gives excellent results; its effects are almost immediately observed. It controls temperature, quiets irritability of stomach, regulates action of the liver and kidneys, and reduces enlarged spleen. It has a mild diuretic effect in many cases, relieving dropsical conditions not dependent upon actual kidney lesion."

The Medical Age.

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Original Articles.

LARGE DOSES OF STRYCHNINE IN PULMONARY AND CARDIAC DISEASES.*

BY THOMAS J. MAYS, A.M., M.D.

From quite an extended experience with the use of strychnine I feel convinced that this drug gives better practical results in the treatment of pulmonary and cardiac diseases than any other single remedy at our command, and it occurred to me that a short discussion of the principles which I have followed in its administration might be of interest.

It is needless to say that strychnine has a more powerful stimulating influence over the nervous system than any other drug in the materia medica, and that besides its general action it has a special influence on the nerve supply of the lungs, heart, stomach, intestines, etc. It is my belief that many affections of the lungs and heart are fundamentally dependent on disorder of the nerves which supply these organs, and that the curative effects of this agent in these diseases rests largely on the power which it has in correcting this primary aberration. Over and above this it has been recently shown that strychnine also has the faculty of multiplying the corpuscular elements of the blood, and is therefore, like iron, a blood-builder. A combination of such valuable properties in a single agent makes it apparent on theoretic grounds alone why strychnine should possess such a beneficial therapeutic effect in the diseases here considered, since anæmia is one of their most common complications. In spite of these desirable qualities I believe we often fail in obtaining its best effects by giving in doses which are entirely too diminutive. I do not mean to say that strychnine should be given in large doses in every disease to which it is applicable, for such a statement might lead to great harm if it were practically carried to its legitimate end, but these remarks pertain only to those diseases to which reference is made in this paper. The custom of giving strychnine in doses of one-sixtieth or one-fiftieth of a grain I have discarded long ago, for I feel satisfied that such amounts are comparatively worthless. It is very rare that I begin with a smaller dose than one-thirty-second of a grain, and more often with one-thirtieth of a grain, and then gradually increase in an ascending scale until I touch the limit of toleration. Strychnine is peculiar in this respect. The length of the ascending scale from the effects of such a dose to a point where the physiological action of the drug begins to devolp itself is usually very long, and during the time that this is traversed by the therapeutist a free opportunity is given in which to obtain the full stimulant action of the drug in gradually increased doses. I usually incorporate one grain of strychnine with quinine, etc., and divide the whole into thirty-two capsules, and give one capsule four times a day. This lasts eight days, and then one-eighth of a grain more of strychnine is added to the whole quantity, which is thereafter increased one-quarter of a grain every eighth day until the limit of toleration is approached. This varies very much in different individuals. I have a number of patients under my care at the present time who are taking one-tenth of a grain, and four who are taking one-seventh of a grain, and one who is taking one-sixth of a grain four times a day. Most of these patients have been taking the drug from three to seven months continuously. I have seen patients, however, who could not endure more than one-twentieth of a grain four times a day. So soon as the patient begins to show evidence of intoxication the dose is reduced to a point where this is no longer manifested, and then maintained there permanently or again increased after

* Read before the Philadelphia County Medical Society.

some time. It is possible, however—and this should always be borne in mind—that the dose which was toxic once may in time be taken with impunity. This would seem to show that the poison line of strychnine recedes, and that the drug establishes a certain degree of tolerance for itself. Yet I have met with one case where the administration of the drug was broken off for almost two weeks, and then, on resuming the same dose which was previously taken, marked rigidity of the lower limbs followed after the first two doses.

What, if any, are the untoward effects of strychnine when given in such large doses? So far as I know, there are none except its occasional tendency to produce diarrhœa; but at the very worst I do not believe this proneness is very pronounced. In my earlier acquaintance with it I fancied that it aggravated the diarrhœa which is such a frequent accompaniment of phthisis, but my later experience fails to confirm this, since I have seen cases of intestinal tuberculosis get well when strychnine was given in combination with morphine and oxide of zinc. It has been asserted that it causes albuminuria by reason of the high blood-tension which it brings about. Of this I have not observed the least evidence, having frequently examined the urine of patients to whom strychnine had been administered in such large doses for more than a year.

I will now briefly consider in greater detail the mode of giving strychnine in each disease to which it is believed to be applicable. In *asthma* I usually begin by introducing about one-twentieth of a grain under the skin, and administer about one-thirtieth or one-twenty-fifth of a grain by the mouth four times a day, and gradually increase this in the way above indicated. Hypodermatically it is given once a day or every other day, and if possible in the evening, until there is an approach to the production of the toxic effects of the drug. Suitable doses of quinine, capsicum, and ammonium muriate will enhance its action. So far as my experience goes, strychnine must be regarded as the most powerful adjuvant in the treatment of asthma, although we must never lose sight of the importance of treating the diathesis or exciting cause on which the disease often rests, and also of improving the general nutrition.

Bronchitis, whether acute or chronic, is very much benefited by strychnine. It checks cough, diminishes expectoration, improves appetite, and puts to one side the whole constitutional relaxation and feebleness frequently present, especially in the chronic form of this disease. It must be given in ascendant doses, and may be combined with benefit with the syrup of the hypophosphites or hydriodic acid, or with both.

Strychnine is one of the most useful agents in treating acute pneumonia, whether this is of the croupous or catarrhal variety. I usually begin by injecting one-twentieth of a grain, and if the case is severe I keep this up morning and evening, together with the internal administration of one-twentieth of a grain every three or four hours until symptoms of intoxication begin to show themselves. This I have seen to take place on the second and third day of the disease. If the case is a mild one, it will suffice to give one-twentieth of a grain every four hours.

I know of no disease which is more eminently benefited by strychnine than pulmonary consumption. Indeed, as a rule, it seems that sufferers from this disease are capable of taking this drug in extraordinary large doses. I have a number of phthisical people under my care at present, both in hospital and in private practice, who are taking over half a grain of it a day—a dose which had been reached by a gradual increase of a smaller one. For a more complete description of the use of strychnine in primary pulmonary diseases I would refer to a paper of mine on this subject, in the Medical News of July 22d, 1893, and the remainder of this paper will be devoted to a consideration of the application of this drug to cardiac and cardio-pulmonic diseases.

In recommending strychnine as one of our most valuable cardiac stimulants, a fear may spring up in the minds of many that this drug is put forward for the purpose of displacing digitalis—the old and well tried heart-tonic. That such a suspicion is not altogether groundless when held by those who prescribe digitalis for almost every phase and form of heart disease they meet,

is true; but he who looks the question of cardiac therapeutics squarely in the face, feels, although more perhaps from an instinctive than from a scientific standpoint, that the action of digitalis is not interchangeable with that of strychnine, and that each fulfills its own peculiar indication in the treatment of diseases of the heart. Although we may not be able to draw a rigid line of demarcation between the behavior of these two agents, we have experimental evidence to show that digitalis acts more on the muscular and less on the nervous structure of the heart than strychnine. My own experiments demonstrate that digitalis enhances or increases the irritability of the heart muscle, while strychnine depresses or reduces it; and that the former arrests the heart in systole, while the latter arrests it in diastole. It is my belief that the action of these drugs is as dissimilar clinically as it has been shown to be physiologically, and that strychnine is principally indicated in those diseases of the heart which are dependent on a disturbance of innervation, as, for example, in simple cardiac weakness and in irregularity and intermittency of its pulsations, while digitalis is preferable in cases where there is a want of compensatory power in the heart muscle, as in valvular incompetency.

Bearing in mind this difference, strychnine should be prescribed when the nerve supply of the heart is enfeebled through auto-intoxication such as is found in the post-paralysis of diphtheria, scarlatina, measles, smallpox, influenza, whooping-cough, and in poisoning from alcohol, lead, mercury, etc.

Irregularity and intermittency of the heart's action are frequently benefited by the administration of large doses of strychnine, and more often than not do we find that digitalis is utterly useless in such cases. Sometimes the irregularity will remain, even under the influence of strychnine, but the symptoms which are dependent on or are a part of this condition, such as pain in the precordium, orthopnœa, oppression of the chest, will improve or disappear, especially if suitable evacuant remedies are used at the same time. This whole disorder I regard as being probably due to a want of power in the discharge of nerve-force of the heart—or rather, perhaps, to a lack of nerve control over the discharge of the muscle-force of the heart. This weakness of nerve-power is not only marked in the heart, but it is also apparent in the lungs and frequently manifests itself, especially in elderly people, in a coexistent œdema of the bases of both lungs.

Moreover, there is often found an irregularity or intermittency of the heart's action in severe seizures of asthma; and I know of nothing which will remove this accompaniment, as well as the original disease, like strychnine in large doses promptly administered, both hypodermatically and by the mouth.

Angina pectoris is another paroxysmal disease in the treatment of which strychnine in large doses stands preëminent.

Again, digitalis is always regarded as the sovereign remedy in the treatment of valvular diseases of the heart and their sequences, but there comes a period in the life history of every such affection in which digitalis, no matter how much benefit was derived from it before, proves utterly useless. This leads of course to disappointment, and often gives rise to serious suspicion concerning the utility of this important agent. The fault lies, however, not in the drug, but in its improper application. It has done all that could be reasonably expected of it. It stimulated the heart muscle to renewed activity after the valvular rupture occurred. It aided in developing its muscular fibres and restored its former power; but now, for some reason or other, the nervous energy of the patient begins to flag, and the heart-walls commence to relax in spite of the muscular hypertrophy which is present, and digitalis no longer possesses the spurring properties which it once had. The blood dams up in the left ventricle and auricle, the pulmonary circulation becomes impaired, œdema and congestion of the lungs follow, and death is threatened by way of the pulmonary organs. It is at such a time, when digitalis fails to counteract these many incidental complications, that strychnine steps in and shows its superior value as a tonic to the waning nerve energy of the heart and lungs.

DISCUSSION.

Dr. Lawrence F. Flick: This is too practical a subject to be permitted to pass with-

out some discussion. There is no drug that has become more popular in recent years than has strychnine just in the class of cases to which Dr. Mays alludes. Whilst we have apparently empirically come to the conclusion that this drug is of very great value in these diseases, I do not know that I have seen a satisfactory explanation of why it is so. There is one peculiar result in the use of strychnine which gives somewhat of a clue to its manner of action. This was not mentioned by Dr. Mays. It is the marked increase of weight that occurs under the use of large doses of strychnine. I do not know of any other drug which will produce this effect so rapidly and so satisfactorily. It seems to me to indicate that the real cause of benefit, after all, is possibly the increase of nutrition; and yet why this increase in nutrition from the use of strychnine? It is probable that its effect in stimulating involuntary muscles has a great deal to do with the result. The special action of strychnine is stimulation of involuntary muscles. This is true not only of the muscles of the heart and of the blood-vessels, but also of the muscles of the stomach, intestines, etc.

In the treatment of tuberculosis, strychnine is certainly one of the most valuable remedies that we possess. It should be used in large doses. Along with many other remedies which go to build up the nervous system and improve the nutrition, it is really essential in the treatment of tuberculosis. When we use remedies which build up the nervous system, and with them use the germicides that have lately been introduced, we can obtain very gratifying results in the treatment of this disease which has hitherto been so discouraging.

Dr. Charles Wirgman: I can give my testimony as to the value of strychnine in asthma. I have a patient suffering with severe asthma, the result of hay fever, taking one-twelfth of a grain four times a day. He is a man of relaxed muscular fibre and rather feeble constitution. He has had these attacks every autumn for some years. I began with one-sixtieth of a grain, and increased to one-fortieth and then to one-thirtieth. Observing no toxic symptoms, I increased the dose to one-twentieth and finally to one-twelfth, four times a day, I think with decided benefit to the general nervous tone. I have never observed in this case or in others any accumulative effect of the drug. As far as its influence upon the pulmonary tract is concerned, I have observed no positive action—that is, in the sense of an expectorant—but it certainly does increase the general tone so that a patient has more strength to expel the secretion which accumulates. The only symptom that might indicate a toxic action has been a slight amount of spinal irritation, but I have been inclined to attribute this to the semi-recumbent position which the patient has been compelled to maintain.

Dr. S. Solis-Cohen: There is no question in my mind that large doses of strychnine can in certain cases be well borne for prolonged periods. In hysterical and other forms of aphonia, and in paralysis following diphtheria, I have frequently given as much as one-fifth of a grain three times a day for several days in succession, having reached this dose by gradual increment; and I now have under my care a man who has been taking one-tenth of a grain of strychnine three times a day for some two years, and who has at times for short periods taken even larger doses; this is a case of syringomyelia with cardiac feebleness. But while I am sure from what Dr. Mays and others have reported, and from my own observations extending over many years, that these doses of strychnine can be well borne and are useful in certain selected cases, I am not one of those who believe that these large doses should be given to every case or to a large number of cases. Both in acute cases and when the drug is to be long continued, I have seen, as a rule, better results from what now-a-days would be considered very small doses, namely, about one-sixty-fourth of a grain, or one milligramme. The reason for that, I think, is quite clear. In some very interesting researches communicated by Mr. Hodges to the American Physiological Association at the last meeting of the Congress of Physicians and Surgeons at Washington, and in which the effects of exercise and rest upon the ganglion cells of the brains of bees and of sparrows were demonstrated, it was shown that during the periods of activity a certain vacuolation of the gray matter of the nerve-cells was produced—an absolute de-

struction of tissue during the physiological process of nervous function. During the period of rest, repair takes place. Strychnine is an agent which above all others stimulates nervous function, and naturally in the process of stimulation of nervous function leads to destruction of nerve tissue. This is, of course, the absolute physical necessity; energy can only be produced, whether in the body or out of it, by a rearrangement of matter—a reduction of existing forms into less complex forms, with liberation of the energy locked up in the complexity of structure. Mr. Hodges also showed some spinal cells from a cat poisoned with strychnine, and called attention to the correspondence between the vacuolation in the spinal cells of the cat from strychnine activity and the vacuolation in the brain-cells of bees and sparrows from normal activity; there is no doubt in my mind that the correspondence holds throughout. Strychnine adds nothing to the stores of energy of the patient. Its great usefulness in apparently giving strength to a weak man is due to the fact that it calls upon him for the exercise to the full of such reserve energy as he possesses. It stimulates the nerve-cells to their highest activity, quickly liberating the locked-up energy, and in so stimulating it inevitably uses up a certain amount of nerve tissue. If, after this, sufficient rest is allowed, repair takes place, and takes place more quickly because the nutritive processes have been stimulated by the action of the drug. Now, if the amount of activity with concomitant reduction of nerve tissue caused by strychnine can be proportioned to the needs of the patient so nicely that we shall get the maximum of stimulation of the nutritional processes and the minimum of expenditure of the patient's nerve tissue, it is evident that that is the proper point at which to stop. Pushing it beyond that, we cause an unnecessary expenditure of energy and loss of tissue, which has to be made up from the food and in other ways. The nicety of adjustment most beneficial is not to be expressed in figures; it differs with the patient and with the disease, and to reach it requires careful observation and good judgment. Still it is something that we should aim at and that every intelligent physician should be able to secure. The fact that we do not kill a patient by large doses of strychnine does not necessarily prove that we have done him good. The fact that a patient is not killed by a surgical operation does not prove that the operation was indicated in that particular case. It may have been or it may not. Dr. Mays has alluded to the tolerance finally produced to large doses of strychnine. In this lies, I think, the patient's safety. The nerve cells become habituated to it, and refuse to respond up to a certain point. It is the small excess beyond this point which produces the therapeutic effect.

In the treatment of acute pneumonia, strychnine is unquestionably one of the best agents that we possess, given in proper doses. I have had occasion to observe at the Philadelphia Hospital, in patients side by side, the comparative effect of small and large doses, and, while admitting all the difficulties in the way of drawing conclusions from such comparisons, I am sure that the patients with small doses did at least as well as those who received large doses. I am not afraid to push strychnine up to one-half a grain, if necessary, and when the indication for such dosage exists. In Dr. Mays's cases I have no doubt that large doses were indicated, but in less skillful hands than Dr Mays's I am sure the routine use of large doses might do harm, not by producing immediate death, but by gradually exhausting the nervous energy of the patient.

In acute cases strychnine arseniate in doses of half a milligramme ($\frac{1}{128}$ grain) can be given, and repeated every fifteen minutes or half an hour until the desired physiological or therapeutic effect is produced. The administration can then be stopped, and, as the effect is often prolonged, need not be repeated until the next day. In some cases, after the patient has thus been given one-thirtieth of a grain, the effect can then be kept up by $\frac{1}{130}$ or $\frac{1}{120}$ grain twice or three times a day.

To repeat what I more particularly desire to contribute to the present discussion, I believe that while strychnine is very useful in all the conditions described by Dr. Mays, the best effect can be obtained by limiting the dose to the smallest quantity that will produce the physiological reaction intended.

Dr. Mays: I do not know that I have much to say in conclusion. The remarks made by Dr. Flick with reference to the influence of strychnine on nutrition are very *à propos*. The reason that I did not allude to this was because I have discussed this part of the subject in the paper to which I referred. It is quite evident to my mind that Dr. Flick has had a plentiful experience with the use of large doses of strychnine, because, among other things, he notes the influence of this drug upon nutrition. This action is certainly remarkable. I have so often observed this gain in weight that it is a common thing for me to expect the patient to gain in weight if he gets strychnine in ordinarily large doses, such as I have spoken of. I do not know whether Dr. Flick is correct in saying that it acts upon the involuntary muscles of the body, or whether it acts upon the trophic nerves. However, there is strong evidence for believing that strychnine affects the trophic or nutritive nerves of the body and stimulates them, and in this way improves nutrition. I have seen remarkable gain in weight in experimental cases in which nothing was given but strychnine hypodermatically for a number of days. There was nearly always decided gain in weight in the cases that I have observed. I gave it in large doses.

In regard to the cumulative effect, I do not think that I have any observations in regard to the accumulation of the drug in the system. While I believe that strychnine acts like drugs that do accumulate in the system, such as atropine, digitalis, and strophanthus, yet there is a marked difference between the action of strychnine and the drugs mentioned. Strychnine does not have the profound effect upon the circulation that the other drugs have. We know that the cumulative effect of digitalis is due to the fact that elimination is checked.

I am sorry that I cannot agree with Dr. Cohen in regard to the benefit of small doses in many diseases, although I believe that some diseases are more easily influenced by strychnine than are others. I believe, however, that pulmonic and cardiac diseases, such as were only referred to in my paper, are less easily influenced by strychnine than are many others. It is especially so in asthma, angina pectoris, and the other pulmonary and cardiac diseases to which I have referred, for in them it is perfectly useless to give small doses with the idea of cure. You might as well turn a garden-hose on a Chicago fire as to expect to do much good with small doses in these diseases. I have tried small doses without any benefit.

In regard to the destructive action to which Dr. Cohen has referred, I can hardly believe that strychnine in ordinary physiological doses can have a destructive influence upon the nervous system, although I can see how a large and poisonous dose could have such influence. Indeed, we well know that atropine, digitalis, alcohol, and many other drugs, in common with strychnine, have such a disintegrating effect in toxic doses; but to say that in stimulant doses they have the same or even a similar effect is very far from the mark. It seems to me to be a confounding of the physiological with the pathological effects of a drug. Although I administer strychnine in large doses, I always remain within the sphere of its stimulant action. In fact, I fail to conceive how any drug which improves the nutritive state of the body can at the same time have a destructive influence on any tissue, except in so far as it may enhance the physiological waste of the body, which in turn is compensated by an increase in its physiological repair.

BROMIDROSIS AND HYPERIDROSIS.

BY SURGN.-CAPT. PATRICK HEHIR, F.R.S.E., F.R.C.S.E.

Cases of local bromidrosis affecting the feet and sometimes the axilla are by no means unfrequent, but the more general condition of foul-smelling perspiration is far from common, therefore the following case, which is of this latter nature, is interesting from more points than one:

H. B——, Saheb, æt. 76 years, a Mohammedan gentleman, sent for me on the 16th of May, 1892, to treat him for an acute attack of eczema of the hands and feet. He led an active life till a few years ago, and then lapsed into a condition of partial dementia with intervals of perfect soundness of mind. He had been a great opium-eater for many

years, but gradually decreased the quantity used, till he now takes only about fifteen grains a day. (He used to consume 90 grains daily; about six years ago.) He does not appear to suffer any pain or inconvenience from the perspiration, except that it has a very sickening smell. The odor emanating from the body of the patient was similar to that from the body of a case of smallpox during the pustular stage of the eruption—at least this is the impression it gave me.

The same odor arises from the feet of the patient, who, like all others suffering from this intensely disagreeable perversion of the perspiratory function, is disgusted with the smell; and as a consequence, knowing himself to be so offensive, has become a recluse. Besides the bad odor, the perspiration is profuse, and he tells me that he has often to change his clothes six times before noon, especially in the hot weather. I have frequently seen the perspiration literally pour from him. Previous to his coming under my treatment he had always confined himself to *Unani* medicines, and, although he has adhered to them for three years, derived no benefit from their use. The perspiration must be very irritating to the skin; for he has suffered for several years from a chronic eczema of the hands and feet, extending up to the elbow and knees, and every now and then affecting the scrotum, anus, and axillæ. The eczema was at one time general, but is now more intense in the hands, axillæ, feet, and about the scrotum, than elsewhere. At times, particularly at the beginning of the hot weather, the disease is somewhat aggravated. There was no reason to believe that the patient was suffering from dyspepsia.

The general health was good, but he suffered from constipation—probably on account of age, insufficient exercise, and the habit of eating opium,—whilst his appetite remained good.

In the form of treatment for the eczema, the feet were washed twice a day with coal-tar soap, freely powdered with lycopodium powder mixed with oxide of zinc, boric acid, and rose powder. On two occasions the tincture of iodine was applied to the feet, but was so irritating that it threatened to produce erysipelas. The eczema was ultimately cured by constant applications of liquor carbonas detergens in the undiluted form.

Minor cases of bromidrosis are very common, especially in people of uncleanly habits, but the appellation is usually reserved for cases giving rise to decided foulness perceptible to the patient and an offensive odor to those near him. As previously stated, the patient originally consulted me for an attack of acute eczema, supervening on a very widespread chronic form of that disease affecting the whole of both hands and forearms and arms up to the axilla. The inflammation itself appeared to have been sufficient to cure a large crop of tinea circinata from which he likewise suffered, for the latter disappeared with the eczema.

Medicinally for the hyperidrosis the following drugs were used:

℞ Tincturæ bellad., ♏viij.
Extracti ergotæ, liquid., ʒ ss, *t. d. s.*

and the following powder was applied to the body several times a day:

℞ Acid salicylic, ʒ iij.
Acid boracic, ℥ iij.
Zinc oxidi, ℥ ss.
Amyl., pulv., ʒ v.
Ros. otto opt., ♏xx.

Misce bene.

The following liniment was applied over one limb of the body each day:

℞ Liniment. belladonnæ, ℥ j.
Tincturæ belladonnæ, ʒ iv.

To be applied at bed-time.

Very little improvement accrued from this treatment, and the powder was replaced by washing the body with vinegar and water and tereben soap, with subsequent application of a strong solution of tannic acid. A slight decrease in the quantity of the perspiration took place from the latter *régime*, but the patient, in a fit of his dementia, declined further treatment.

As a rule, bromidrosis and osmidrosis accompany hyperidrosis, and especially is this so when the hyperidrosis is general; but not necessarily, for I have recently had under my care a case in which the fœtid perspiration from the feet was disgusting to the patient and was sufficiently irritating to give rise to a form of intractable eczema.

The case now recorded is peculiar from the facts: That as a rule the perspiratory apparatus of aged persons is somewhat defective in function from the atrophic changes which have occurred in the sudoriferous glands: That it was general: That there were periods of complete remission: That associated with it was a severe variety of eczema: That the trunk was uninvolved: That it was associated with a form of partial dementia; and this strange connection is perhaps the most interesting feature of the case, as indicating some relation with the nervous system, possibly a form of general vaso-motor paralysis.

The cause of the fœtor is, of course, a form of fermentatiou or decomposition of the fatty matters secreted by the epithelial cells lining the sudoriferous glands—the fatty matters, and especially the acids (coproic, caprylic, butyric) *of the aromatic acid series.*

FIFTY MASTOID OPERATIONS.

BY E. ALEXANDER RANDALL, M.D.

The opening of the mastoid portion of the temporal bone for the evacuation of pus, after the unmerited eclipse into which it had been cast for nearly a century, has gained increasing use and advocacy during the last few decades. Begun as a desperate resort, and often withheld too long in cases demanding it, it has been practiced with increasing boldness by general and special surgeons, with the result that timely and careful employment has greatly improved the record of its results; yet it has again been employed under doubtful indications, in a way that has raised anew questions as to its propriety. The great advance in intra-cranial surgery has shown that conditions once regarded as hopeless can be successfully combated by modern methods. The timid plan of cutting down upon the mastoid and resting satisfied with that, is growing less frequent, since the conservatives are forced to admit that they have then to wait for months or years for nature to loosen or throw off dead tissue, of which most, if not all, might be removed with safety in a few minutes; and wider clinical and anatomical study is showing the way more clearly to radical but truly conservative measures. Yet the aurist can never forget that the organ of one of the most important senses is committed to his care, nor be content if he has avoided the dangers to life at needless cost to the hearing. The relative safety of timely operation has been proven by the fact that death is growing steadily less frequent in operated cases, and falls far below the proportion of fatalities where operation is indicated but refused. At the same time we are improving the definition of the larger group of cases where vigorous antiphlogistic treatment, by hot douching, dry heat, and rest in bed, will safely avoid the dangers of mastoid inflammation and obviate the resort to operative intervention. The wider spread of rational treatment of tympanic suppurations will doubtless do as much to lessen the frequency of serious intra-cranial extensions as the better and more hopeful diagnosis of their occurrence and accessibility during life will bring them into notice as demanding intervention and yielding to surgical skill.

The notable results obtained of late years by general surgeons has called more widespread attention to this field and awakened more general interest; but it should not be forgotten that it has been quite frequently the aurist who has diagnosticated the case, indicated the operation, and only sometimes called in the general surgeon to perform it. And while the aurist has rarely reported his results in these fields in general meetings and journals, it has not been because he has not obtained the same brilliant success, though oftener without than with perilous and somewhat questionable operation. It should be better known than it is that the suggestion to open and evacuate the thrombosed lateral sinus was put forth by Zaufal ten years before it occurred to Victor Horsley; and that it has been rarely done by aurists because by mere mastoid trephining they have obtained recovery in too many pyæmic cases, where the long-known purulent thrombosis in the mastoid emissary vein showed thrombosis of the lateral sinus. It has been suggested that the aurist ought to call in the general surgeon to do his mastoid operations; and surgeons in conclave, as in Berlin a few years ago, have found much fault with the lack of radicalism which we often show. But Küster, who was the most hostile critic, showed

in the discussion that he had small and none too brilliant experience of mastoid trephining and had no adequate acquaintance with the methods or results of the aurists whom he criticised. The method of chiseling away the back wall of the auditory canal, which he advocated, had long been employed by aurists, like myself, in the appropriate cases; but will probably not often be practiced as the routine procedure by anyone having fair respect for the organ of hearing and a knowledge of the perfect results generally obtainable at less risk and cost. That v. Bergmann and others have had large and valuable experience in this line is undoubted; yet what general surgeon has done some three hundred of these operations, like J. Orne Greene of Boston, Schwartze of Halle, and several other otologists? Having done less than a hundred operations myself, I can take but a low place in the list of aural operators; yet few, if any, of the general surgeons of this or other cities can cite a wider or a better series of cases. Men are known sometimes by their failures, and perhaps some of you can tell of more unsuccess on my part than I am myself aware of; yet I, too, could point to many histories of cases that came to me from other men, or, leaving me, have died under the hands of others. And it is because it is very hard for the operator to gain such knowledge as to the ultimate results of his cases that I here present my experience for criticism and emendation. Doubtless the four years of epidemic influenza have greatly influenced the matter of mastoid inflammation, and enforced more frequent resort to operative intervention, for the notices of such cases have redoubled during this period, and my operations, previously infrequent, rose to seven in 1889, ten in 1890, fifteen in 1891, and twenty in 1892. The increase of my ear patients from some 1,200 at the earlier, to 1,500 at the latter period, has combined with other influences to enlarge my experience in this direction; but other men have the same increase to report. Roosa, who has always advocated operation, had but thirty-four cases to report from his twenty years' work up to 1890, and has since then opened the mastoid more than a hundred times; and Schwartze, who took from 1864 to 1883 to obtain his first hundred operations, has been doing them in treble proportion since. Yet the finding of past years, that about 4 per cent. of my ear cases presented evidences of mastoid inflammation and about one-fourth of these demanded operation (50 cases among 5,000), has not been verified this year; and whereas the first half of 1892 gave me fourteen operations, but few mastoid cases and a single operation have been met this year. Most of these operations I have myself performed, but a few have been done by others—as some of the University cases by Dr. Brown, the instructor in otology, and the one of this year was kindly done by Dr. William J. Taylor during the incapacitation of my right hand.

As a result of the study of some two hundred cases where the suggestions of mastoid trouble, as furnished by pain, redness, œdema, apparent fluctuation, and deep-seated tenderness to pressure, have been decidedly disquieting, I believe that quite three-fourths of such cases can be brought safely through without resort to operation; and that unless the symptoms are urgent, or the fluctuation unmistakable, the surgeon can give a fair trial to vigorous use of heat by douche and hot-water bottles, with rest in bed and good hygiene. But a number of my patients were brought to me after all hope of resolution was gone; and when pus is present in or on the mastoid, I can imagine little cause for delay in evacuating it. The fatal results of the disease may not always be avoided; slow, tedious healing may be the best that can safely be secured, and facial palsy or impairment of hearing may prove irremediable, or may even occur after operation. Prognosis must be cautious, and one should never promise his patient anything more than that he will give him his best judgment and skill; yet, none the less, in careful hands the opening of the mastoid will continue to give, as it has done in thousands of cases in the past, the fullest justification for its performance. The fifty cases which I here report include but two of known fatal issue, although others ultimately died of tubercular meningitis or related troubles, as my specimens will show. Only one case (which has been reported in full elsewhere) gave room for ascribing the death to the operation, and it is the only case in which it

might be said that no pus was found in the carious antrum. Generally a bone sinus was already present, sometimes already communicating with the exterior, and the operation was the rather trivial one of curetting or otherwise removing the carious portion of the bone. While fully believing in the desirability of the removal of every particle of pathological tissue, whether soft or bony, with closure of the wound for primary healing, I doubt if this can often be safely attained. Due regard for the important structures in and around the field of operation demands that with full knowledge of the anatomy we shall be radical in directions where it is safe even to overdo the absolute requirements, but conservative to the verge of timidity as to opening the facial or semicircular canal, the middle cerebral fossa, or the lateral sinus. Recovery has often taken place uncomplicated by such an occurrence; but its needless performance should be regarded as a blunder which might prove disastrous.

The technique of operating should vary with the nature and needs of the case. Usually a liberal incision close behind the auricle, free exposure of the bone, and penetration by the gouge close behind the auditory canal *below* the level of its upper margin and the *spina supra meatum*, is safest and surest to reach the antrum. The claim of Koerner, that the cranial measurements give any assurance of safety or danger, are wholly unsubstantiated by my far wider study. The advice to operate in any one way, as urged by Küster, with more than the minimum requisite of violence to the integrity of the parts, I unhesitatingly condemn as irrational. The intricate mastoid cavities cannot by any fair thoroughness be surely made and kept aseptic, and extensive areas of freshly opened bone afford perilous opportunities for septic absorption.

Cases are met where the lateral sinus, covered by the merest film of bone, fully occupies the ordinary field of operation, and it may even be visible through the intact bone; therefore, close scrutiny of the uncovered mastoid is a prerequisite to any penetration. The trephine or drill is being less used by all men who operate often, since study and experience show that in the dangerous cases their use is less safe than the gouge. It remains to be seen how far the mallet can be safely employed, in spite of the advocacy of Schwartze and his disciples; for my part, I expect to use it very rarely. The hand-gouge is safer, though slower, and can be carried through the hardest bone. Within the mastoid the spoon and the burr are the safest instruments for carrying the opening inward, forward, and slightly upward to the antrum. The middle cerebral fossa is rarely as low as the upper wall of the meatus, and never below it, at the point of operation. The facial and semicircular canals are never less than 15 mm. from the spina, and in a large convex mastoid even greater penetration may be safe; but the antrum ought always to be encountered without going deeper. Drainage and access to the antrum is the principal point in the great majority of cases, with extension of the operation in any other direction according to the needs. Irrigation is a questionable measure, both in operation and after-treatment, and is better avoided. Drain-tubes, gauze packings, and open treatment of the wound are unfortunate necessities in most cases, but should be avoided if safely possible, the free incision being narrowed or closed by sutures. Healing is possible by first intention in a few days; but several weeks of after-treatment is usually requisite; and if thoroughness has not been practiced because of real or groundless fear of doing too much, or the patient's recuperation is poor, months may pass before full healing can be gained. Recurrence may take place under provocation, just as the other ear may be similarly involved; but this will be rare after a proper operation, and, like the occasional deaths, will be in spite of the operation and its real benefits.

Whether operated on or not, mastoid empyema will generally be a very dangerous condition, calling for the fullest skill of the medical man to prevent it if only incipient, to diagnosticate it if present, and to treat it and its consequences with fearless conservatism.

BEZOLD'S MASTOID DISEASE.*

BY WILLIAM J. TAYLOR, M.D.

On the evening of May 1st, 1892, Henry

*Read before Philadelphia County Medical Society.

M——, aged 25 years, and unmarried, was admitted into the surgical ward of St. Agnes Hospital. Family history very good. Some seven years before, suffered from "a running" of the right ear which lasted for only two or three days. It "got well of itself," and from that time until the beginning of the present illness he had no further trouble. About Christmas-time, a little over five months before his admission into this hospital, he had an attack of something resembling "*la grippe*," accompanied by sore-throat of a mild type; from this illness he also recovered rapidly. The present illness began about March 30th, with pain in the right ear and headache; the pain persisted, and in about two weeks centred in the ear. He was then treated for over two weeks as an outpatient of the Medico-Chirurgical Hospital, but became much worse and ultimately was confined to bed.

The day before his admission into the hospital he was seen by Dr. O'Hara, who made an incision over the mastoid region. No perforation or necrosis of the bone could be found, and on account of the gravity of the case he was sent to St. Agnes.

Upon admission his condition was one of pronounced septic poisoning, and I feared the process had extended to the lateral sinus, and possibly to the cerebral tissues. His mental condition was dull, vitality much depressed; temperature 100° F.; pulse weak and very rapid; manifest paralysis of the right facial nerve, but no evidences of cerebral motor disturbance. As delay would be dangerous, he was placed under the influence of ether at once. There was much swelling and œdema over the right mastoid region, which extended downward into the neck, quite to the upper border of the clavicle; the skin of the neck much reddened and congested. Pus was oozing from the incision which Dr. O'Hara had made behind the ear, and from the external auditory meatus, so this incision was now enlarged. The bone exposed was found to be hard and white, while pus was seen coming from below and from the direction of the auditory canal. Next the incision was extended downward into the neck across the tip of the mastoid process, and over the sterno-mastoid muscle, which liberated a large quantity of pus. The tip of the mastoid process was found to be necrosed, and the whole medial surface softened and broken down; a probe, and afterward a curette and the finger, could be passed from the inner or medial side into the centre of the mastoid antrum.

The posterior wall of the auditory canal was now chiseled through and the middle-ear cavity curetted with care but great thoroughness, and a large amount of cheesy pus removed. The pus had burrowed into the digastric fossa and then down the neck beneath the sterno-mastoid muscle and along the tract of the great vessels.

All of the mastoid process which showed evidence of necrosis was carefully removed by means of the chisel and curette, and the whole wound thoroughly disinfected. The deep wound in the neck was drained by means of large rubber tubing, and packed with iodoform gauze. As I did not have at hand rubber tubing of proper size, I passed a bundle of horsehair down through the external auditory meatus into the middle ear, and out through the wound in the mastoid process, thus insuring free exit for all inflammatory products. The remainder of the wound and auditory meatus was packed lightly with iodoform gauze.

An ample dressing of bichloride gauze was applied covering the whole side of the head and neck, and the patient placed in bed. I feared, as previously stated, that cerebral abscess or other extension of the septic process had already occurred, but my dissection had been so extensive, and the operation so prolonged, I thought it best to wait and see if further operative measures would be necessary. His general condition by this time was grave and the shock was most profound.

The improvement in symptoms was manifest almost immediately. Reaction from the effects of the operation was somewhat slow but sure. His progress toward recovery was from this time rapid and without special interest. Within a few days the drainage-tubes and horsehair were removed, and the wounds which had not been closed by sutures packed gently with iodoform gauze to insure free drainage, and a generous bichloride gauze dressing applied over the whole side of the head.

On the seventh day temperature had reached the normal, the highest point being 102.8° (this on the day following the operation), and remained so from that time out. For a long time, however, the heart was extremely weak, though no valvular lesion could be detected; the pulse was very weak and very rapid, and there was a difference in volume between the two radial beats.

Under tonics, stimulants, and good food, he rapidly improved in health and strength, and was discharged from the hospital, July 14th, well.

The facial paralysis persisted, however. This gradually improved, but, up to the date of his discharge from hospital, inability to close the upper eyelid was very apparent. The uvula also was paralyzed on the right side, and the sense of taste diminished on the same side of the tongue as well. His general health was very fair, though he still showed in his appearance signs of the severe illness through which he had passed.

On Oct. 5th he was examined by Dr. Isaac Barton, who gives the following report:

"I find evidence of a ruptured membrane, possibly for the escape of pus from his right side. The membrane now has partially reformed, and his hearing with the watch on this side is four inches, on the left side normal. The 'A' tuning-fork is heard at five inches on the right side, while on the left it is normal.

"Bone conduction on the right side is very poor with the 'A' and 'C' tuning-fork, being the result of the operation and previous condition of the mastoid cells. Nasal passage, anterior and posterior, somewhat congested but free for breathing space. Eustachian orifice of left side normal, that of the right side much thickened but not occluded."

In December, Dr. O'Hara called me to see him in consultation, as symptoms of typhoid fever were present. By this time the facial paralysis was entirely relieved, but he passed through a typical attack of typhoid fever. He had several hæmorrhages from the bowels, and in the course of a few weeks periostitis of both shin-bones developed. Suppuration occurred. Dr. David Bevan very kindly made bacteriological examination of some of the pus and reported *staphylococcus pyogenes albus*.

ON THE INJECTION OF THE BROWN-SEQUARD LIQUID AND THE NERVE SUBSTANCE OF CONSTANTIN PAUL.

BY DR. ROBERTO MASSALONGO.

As a result of my numerous experiments, I believe that I may with a clear conscience state my conclusion—that the testicular liquid of young, vigorous animals exerts no influence worthy of mention on the human organism. I willingly concede that certain phenomena, occurring during and for a certain time after treatment, are to be regarded as the passing symptoms of a state of excitation prevailing throughout the nervous system, especially as these phenomena are usually observable after the first subcutaneous injections, hence at a time when the patients are in a state of expectation and attention; later on, habituation causes these symptoms of excitation to assert themselves less distinctly.

It is well known, and Feré has established the fact experimentally, that the psychic state of an individual has a great influence on the activities of the nervous system and the functions of organic life in general.

The same influence is sufficient, in my judgment, to account for the augmentation of muscular energy observed with the dynamometer, and the slight modifications of the pulse and respiration, inasmuch as the same phenomena are to be observed in persons receiving injections of distilled water. The elevation of bodily temperature observed in exceptional cases, to the extent of several decigrades, after injection, I can ascribe to nothing else than accidental occurrence or the self-same neuro-vascular excitation.

With respect to the real therapeutic results of Brown-Séquard's injections in this or that disease, they may be looked upon as absolutely negative, inasmuch as we are not justified in regarding an insignificant and transient amelioration, or a brief interruption of several morbid symptoms, in this or that patient, as the curative result of the injections in question. I obtained no improvement whatever in the fundamental conditions of organic diseases, as in cases of spermatorrhœa, pulmonary tuberculosis, epilepsy, alcoholic tremor, softening of the brain, tabes, etc. I did, however, observe apparently good results in cases of hysteria,

neurasthenia, paramyoclonus of neurasthenic origin—thus, in diseases in which a potent factor, viz., "suggestion," is permitted to exert a beneficent influence. Who, indeed, may deny the great dynamogenic power of suggestion? I, for my part, am convinced that those physicians who believe that they have eliminated the influence of "suggestion" from their experiments have sadly deceived themselves.

But even if prepared to assume, with Brown-Séquard and his disciples, that the testicular liquid obtained from young and vigorous animals is capable of infusing new energy, of elevating the dynamogenic power of the nervous centres, etc., was it altogether essential that recourse should be had to this agent instead of to other more rational and more efficacious nerve-invigorating remedies or methods (electrotherapy, hydrotherapy, iron, arsenic, strychnine, aërotherapy, mechanotherapy, climatic treatment, wine, nutritious feeding, etc.), which have enjoyed the best reputation for many, many years amongst physicians and laymen as curative agencies, and which have been recognized as such by science and by experience?

I close the first part of my treatise with the following conclusions:

The subcutaneous injection of the testicular liquid of young and healthy animals has no effect—not even the slightest—upon the human organism.

The insignificant and transitory modifications of circulation, respiration, temperature and muscular energy may be readily explained by the simple psychic excitation and attention of the individual subjected to these injections.

In the various organic morbid conditions in which the Brown-Séquard method of injection was applied, the results were negative, since the slight and transitory improvements observed here and there are not to be ascribed to the action of the injected liquid, but rather to the influence of imagination or "suggestion." To the latter alone must be accredited the cure of several cases of functional nervous disease such as hysteria, neurasthenia, etc., for in these instances psychotherapy is sufficient in itself to produce the same results.

Accordingly, solely and alone as a suggestive remedy can the Brown-Sèquard injections present any advantage in the treatment of some of the symptoms of various (particularly nervous) diseases.

DIAGNOSIS AND TREATMENT OF FRACTURE IN THE NECK OF THE FEMUR IN ADVANCED LIFE.*

BY OSCAR H. ALLIS, M.D.

After sixty years of age, dislocations of the hip are rare—I have seen but one dislocation after that period, in a female. Indeed, so rare are dislocations after fifty years of age (especially in woman) that one may reasonably doubt the possibility of their occurrence. If this is probable at fifty, it becomes reasonably certain that at the age of seventy or eighty an injury, whatever it be, cannot be dislocation.

If a person be thrown from a rapidly moving carriage, or drop a considerable height, sufficient momentum will be created to make any variety of accident possible; but in very many cases the amount of momentum is not sufficient to dislocate a joint. An aged woman slips from a chair, falls to the floor, and is unable to rise, or in walking along the floor catches her foot in the carpet; she may not even fall, for she may catch hold of something. Cases are on record of aged females turning in bed and immediately complaining of pain in the hip attended with helplessness. One of the most frequent causes of hip injuries is a fall from the standing posture. Now in none of these instances is sufficient momentum created to cause a dislocation, and hence one can, from the history in many cases, exclude dislocation as a possible result of the accident.

In all cases where a person is rendered immediately and totally helpless, some grave injury must be predicated—the word "immediately" may apply to any accident, but "totally" requires limitations. One person will fall, fracture the neck of the femur, rise with difficulty, and by the aid of a friend or a cane walk home. Another cannot rise. Now I say that, so far as the hip is concerned, both are totally disabled. If we observe the mode of progression, it is seen that scarcely

*Read before Philadelphia County Medical Society.

any weight is placed upon the lame limb. I have placed my hand on the floor and asked such a one to step upon it and bear the entire weight upon it, and have thus demonstrated practically how little dependence the patient placed upon the injured limb. If the patient is lying in bed, the degree of helplessness may be detected by asking to flex the limb, or raise it full length from the bed. The imperfect, ineffectual effort, the insinuation of the sound toes beneath the ankle of the lame limb, are eloquent confessions of helplessness.

The patient lying in bed, the two limbs lying parallel, and both of them for their full length touching the bed all the way down, no possible dislocation is present. On the other hand, if the suspected limb lie parallel with its mate, and full length upon the bed, but at the same time it is shorter and everted, we have good reasons to suspect a fracture; and if the injury occurred in advanced life and from a trifling cause, the seat of the fracture is above the shaft—it is in the neck of the femur. Eversion of the foot may not be present, but if we ask the patient to invert it no result will follow.

Thus far the physician has not placed his hand upon his patient. Thus far he has, at least, done no harm. I am now to take up the active positive measures recommended by authors and teachers which are too often followed blindly and to the patient's detriment.

To prevent unnecessary pain, to overcome the action of muscles, an anæsthetic is often advised. For what purpose—to restore a dislocation? No, but rather to enable the examiner to elicit *crepitus* and to establish beyond a peradventure the presence of fracture and its exact seat. Surgeons have written learnedly upon the differential diagnosis between intra- and extra-capsular fractures, and to be dead-sure, ether, they say, must be administered.

Of all the signs of fracture, none is more difficult to elicit or more uncertain than that of crepitus. The short fragment is usually not more than an inch in length and perfectly movable in all directions. If, as a fortunate result of the injury, the fracture is impacted, partially attached by bone or by periosteum, then the short fragment will follow the long fragment and no sense of crepitus will be elicited. But the examiner, fully alive to the importance of determining positively the nature of the injury, and knowing that he has abolished pain with his anæsthetic, lifts the thigh vertically and then depresses it, repeating the manœuvre until he is sure of a sense of grating; while to locate the injury, to fix the precise direction of the fracture, to be able to say that it is intra-capsular or the reverse, the examiner requests an assistant to rotate the flexed or extended limb, while he studies the axis upon which the shaft revolves. One surgeon will satisfy himself that fracture is present by rotating the flexed thigh far beyond its normal possibilities, while another, to be certain, hyper-extends the thigh. And all this in a person seventy or eighty years of age, that does not exhibit a single symptom of dislocation, the only result of an injury that may be benefited by an anæsthetic or may suffer from delay. I therefore cannot too pointedly condemn the employment of an anæsthetic when there is no single symptom of dislocation, nor too earnestly condemn all rude efforts, after fracture is suspected, to establish its exact locality.

From the history of the case and from inspection, the physician may strongly suspect fracture. It is important to have more than a suspicion. It is important that the diagnosis be reached, and that, too, without mischief or unnecessary pain. To do this, no single symptom is, in my judgment, equal in value to that furnished by the *fascia lata*; this very important structure has a value in locomotion and in the erect posture that few appreciate; it consists of a strong, pliable, but inelastic structure, with a function akin to that of a ligament, and extending from the crest of the ilium to the outer tuberosity of the tibia. In its course it passes over the great trochanter and sends a process of attachment throughout the whole length of the femur. This fascia possesses signal value in enabling man to stand, restfully, upon a single limb. It is of the utmost importance that every physician in general practice should study this fascia, and he can do it best on his own person. Now, in case of fracture of the neck of the femur this fascia will be relaxed. It can readily be ascer-

tained while the patient is recumbent, by gently adducting the suspected limb; under normal circumstances adduction makes the fascia tense. If it cannot be made tense in the injured limb as it can be in the sound; if the fingers can be depressed above the injured trochanter and are resisted upon the sound side, we have a most conclusive demonstration of fracture of the neck of the femur.

In conclusion I will say that, in the aged, a slight fall rendering the patient helpless, with the limbs lying parallel, shortened, eversion, and a relaxed *fascia lata*, all the elements of the problem are present, and the conclusion that fracture is present is irresistible—and the diagnosis has been reached without entailing unnecessary pain or aggravating an injury which is at best permanently crippling.

The treatment must not be misunderstood. It is not treatment of fracture of the neck of the femur but of fracture of the neck of the femur *in the aged*. If the last clause is omitted, or for a single moment left out of the problem, the result may be disastrous.

In the treatment of fractures generally, the cardinal principles are *fixation* and *rest*. The important question is: Can prolonged fixation be attained in fracture of the neck of the femur in the aged and feeble? What are the conditions? An aged woman, often with an incontinent, irritable bladder, if she lie quietly upon her back, with splints to hold the limb still, must be disturbed when the drawsheets are changed; and no matter how often this is done, the whole sacral region is doomed to constant maceration—this, in a person of feeble circulation. The result is pressure and bed-sores within the first week of treatment. Then what? Of course, remove the splints. But would it not have been better to have protected the patient against bed-sores? No one will ever know the number of deaths due to bed-sores, the result of treatment of fractures of the neck of the femur by means of splints and confinement.

What then is to be done? If I were to give a universal rule, I would say: *Treat the patient*—not the fracture. But it is asked: What result will follow from non-treatment of the fracture? Let me mention the history of a few cases:

Case 1.—A man, about 70 years of age, fell through a board walk, and was unable to rise. He was seen a few hours afterward by a physician, who assured him he might congratulate himself on having broken no bones, and that he would soon walk as well as ever. For seventeen weeks he had no other treatment than such as would be proper for a bruise. Subsequently he was told he had sustained a fracture of the neck of the femur, and that now he would do as well to move about and regain his strength. Remember, this man had no treatment for fracture from first to last, and to-day he can go up and down stairs without taking hold of the banisters or the help of a cane.

Case 2.—A man had fallen upon the icy pavement. He arose with great difficulty and was helped home. Thinking he was only bruised, he sought no medical advice; but finding, at the end of three months, that he was still lame, he sent for his physician. This man was lame, but walking all about. He had only remained in bed for three days, after which he rose daily and sat about in chairs. Result: as good a limb as could have been secured by the most elaborate fracture-apparatus.

These cases could be supplemented by others from the experience of every general practitioner, and the lesson derived from them is important. The patient un-surgically treated, treats himself surgically and scientifically. Owing to the pain in the hip, he is obliged to move with great care and deliberation, but, regarding the injury as only a bruise, he asks to be helped out of bed, for he argues that he is as well up; thus bed-sores are averted, while by deliberate, gentle movements no possible harm is done to the efforts at repair.

Following what may be denominated the "no-fracture-treatment-plan," I turn my patient on the sound side the day after the injury. I do not turn the trunk a little, leaving the hips undisturbed, but turn fully on the side, usually placing a pillow between the knees for the purpose of comfort and of steadying the injured limb. This turning on the side should be attended to promptly, no later than the second day; it is a painless procedure and yields *so much comfort*. If the patient is doing well, he may get upon the chair when the bowels require it. In this the general constitutional condition must be considered. The shock of fracture in the

aged must not be undervalued. It requires days, even weeks, sometimes, for such persons to rally, hence the physician will act wisely if he considers the age and feebleness of his patient. There is less need of haste if there is nothing to fear from bed-sores—hence daily, or even twice daily, turning the patient upon the sound side, will make it possible to delay the getting out of bed.

When the patient can bear removal to a chair, I attend to it myself, as this gives confidence and teaches the nurse; while the nurse takes the body, I take both limbs, and, turning the sufferer, I bring the legs to hang over the bed. With both arms around my neck, I place both of mine around the body of the patient, who is thus assisted to stand, and turning slowly around, is seated in a chair provided. If this is done without haste or excitement, the patient will not wait for an invitation for a second outing. This will give time to air and fix the bed, and will also have a tonic effect upon the sufferer's whole system.

I am not asking my readers to subscribe to a theory, but am recounting a practice I adopt in public and in private, and of whose good results I can show many cases. Let me mention one that bade fair to be most unpromising:

Case 3.—Mrs. J——, 72 years of age, was knocked down at market and brought home. She looked older than her years, from the effects of paralysis agitans. Incessantly during waking hours her head nodded, her arms shook, and her legs danced. This woman was put in bed on Saturday, and on Monday, two days later, a small red spot appeared upon the sacrum—the initial step toward a bed-sore. This remained for weeks, never getting larger than a three-cent piece, and not going deeper than the true skin, but was prevented from spreading by daily turning the patient on her sound side and, in about ten days, getting her out of bed into a chair. Had this patient been confined to bed with a fracture-apparatus for a single week, a large bed-sore would have undoubtedly been formed. Result of treatment: patient able to walk up and down stairs.

Another case was as follows:

Case 4.—A clergyman, 80 years of age, was knocked down by a passing carriage. No attempt at confining patient to bed. I saw him from the first and throughout his housing. He was out of bed within the first week, and then daily. Result: walked again, up and down stairs, and, old as he was, returned to his pulpit duties.

Cases like this prove that the let-alone treatment insures excellent results, while it relieves the patient of a vast degree of discomfort, to say nothing of more serious results.

What I have said must not be construed as a wholesale condemnation of surgical appliances. What I specially desire to emphasize is that the life and future of the *patient* is of more value than the broken bone; that the bone will take care of itself if the physician takes care of his patient. If surgical appliances are employed, let them prove their excellence by increasing the *comfort* of the aged sufferer. If implements are employed, those are best suited that can be entirely laid aside daily while the patient is turned on her side for a rest, or placed in a comfortable chair.

Nature never intended intra-capsular fractures to unite with bone according to the processes she adopts in fractures of the shaft:

First.—She has inadequate nutriment for bony repair. The short proximal fragment is almost without vascular support. To this, it will be replied that the artery of the *teres* ligament supplies it. Even were this true, the nourishment is scant for such a work. But I do not accept the theory that the head of the bone gets its supply from the *teres* tendon. This tendon is absent in the elephant, in the anthropomorpha, in the South American sloth, in the orang-outang, and occasionally in man. I believe the ligament has another function and does not contribute to the food-supply of the head of the femur.

Second.—What would be the result if fractures of the neck united according to the laws of fracture of the shaft? In fracture of the shaft the provisional callus is often twice the diameter of the bone, and bone, periosteum, fascia, and muscle are all melted down in the inflammatory process. How would this work in fracture of the neck? How would the femur execute its movements with a neck twice the diameter of the head? Such a condition would invite re-fracture, or abridge to a great extent the movements of the bone.

The let-alone treatment is no new mode of practice; it is as old as Sir Astley Cooper, and I believe is based on sound hygiene and pathology.

Philadelphia, Pa.

Society Meetings.

ANNUAL MEETING OF WAYNE COUNTY MEDICAL SOCIETY, OCT. 5th, 1893.

President O. S. Armstrong's Address.

I have not prepared a formal address for this evening, for such wear an air of sameness and run the risk of becoming wearisome. But I would like very briefly to call your attention to a few facts that ought to be of interest to every member. About a year ago I called attention to what I believed would result in benefiting every practitioner in the city who attends the meetings of any medical society, viz., the amalgamation of all the regular medical societies in this County. Since then the matter has been discussed among members of the various organizations and a meeting proposed for the purpose of arriving at some conclusion in regard to the matter, by a committee from each. I believe that before another year has passed the union will have become an accomplished fact.

When elected to the honorable office from which I retire to-night, I asked your aid in making our meetings more interesting and more fully attended than they had been in the past, and I am glad to be able to say that more papers have been read and discussed than in any previous year. The attendance has been fairly good, for it must be borne in mind that the doctor is a busy man and that his working hours not infrequently extend from sun to sun. Nevertheless, it seems to me, if we only took time to think of the great amount of medical truth that may be acquired by a regular attendance at society meetings, we could and would be there oftener.

In these meetings we also get to know each other better, appreciate each other more, and may help gather into our anatomy a little more charity and good-will for one another.

The increase in membership during the past twelve months has been phenomenal, and our untiring Secretary, to whose energy I think this growth is largely due, will no doubt surprise you when he makes his report.

I am rejoiced to be able to say that we have had no deaths since our last annual meeting, and trust that for many years we may all be able to meet and discuss the habits and haunts of the ever-increasing family of *bacilli*.

And now, thanking you all for your uniform courtesy, for your good-will, and for that hearty *bonhomie* which has characterized our association, I would be pleased to have you join me in discussing a little banquet to build up our physical strength after our year of exhausting labor.

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Treasurer's Report.

Income from dues	$127 00
Expenditures per invoice accounts	119 00
Balance in treasury	8 00

There are no outstanding accounts against the Wayne County Medical Society to date.

All of which is respectfully submitted.

C. HENRI LEONARD, *Treas.*

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Secretary's Report.

GENTLEMEN:—Your co-operation with the officers of our Society has made it possible for us to do what no other medical society has ever done in Michigan—the taking in of forty active, two corresponding, and four honorary members in the past year. This surpasses the record, and not alone the quantity but the quality of our annex is of the kind that will help to make a grand medical society. I believe we should give more praise and honor, where praise and honor are due, to those of our noble profession, while they are still alive and with us. I would therefore mention of our new members, Dr. J. Flinterman, an old soldier in the ranks, one that we all respect for his professional honor and ability; Dr. Geo. V. Voorhees, who comes to us from Coldwater with a good, honorable State reputation; Dr. L. E. Maire, holding the professorial chair of Surgery to the Eye and Ear Department at the

Michigan College of Medicine and Surgery; also thirty-seven other gentlemen, younger in the profession but still imbued with that real and indomitable will that will make for themselves such positions that we will feel proud and honored to know that they are with us. I would also mention your two new corresponding members, Dr. Geo. H. Rohé, of Baltimore, Md., well known to the profession throughout the length and breadth of our land; Dr. Geo. C. Ober, of Washington, D.C., who enjoys an extensive and lucrative practice. For ability and position we feel proud in honoring these gentlemen as corresponding members in our Society.

To the honorary list we have added in the last year: Dr. H. A. McCallum, a young gentleman who has laid the foundation for the bringing forth of original researches in the particular line he has chosen as a specialty; Dr. S. C. Graves, located in the centre of our State, and who has centred in himself the requirements of an energetic, careful surgeon; Dr. Rafael Lavista, President of the Pan-American Medical Congress, a physician and surgeon of Mexico, with a name already so prominent that he stands in the foremost rank in his profession; Dr. Juan J. Ulloa, from a country still further south, who has pushed himself by energy and perseverance well to the front in his profession.

I wish to call attention to the exhibition of new instruments. The first of the year was shown by Dr. J. J. Mulheron, when he explained the superiority of the Tarnier forceps. The last, the introduction of a new rectal instrument by its inventor, Dr. S. J. Dean, is an unparalleled event in our Society.

Fifteen papers were read before the Society: Dr. R. H. Honner, "Treatment of Typhoid Fever;" Dr. J. J. Mulheron, "Complications of Typhoid Fever;" Dr. W. C. Heggie, "Hæmorrhoids;" Dr. K. Gunsolus, "Uterine Hæmorrhage;" Dr. W. D. MacQuisten, "A Case of Pneumonia;" Dr. J. F. McPherson, "Monstrosities;" Dr. D. L. Dakin, "Refilling of Prescriptions;" Dr. C. B. Stone, "Advantages of the Physician Filling His Own Prescriptions;" Dr. John Croft, "Aphthæ;" Dr. Samuel Bell, "Physiology and Contra-indication of Artificial Anæsthesia;" Dr. H. A. McCallum, "What Evolution Teaches concerning Pathology and Treatment of Heart Disease;" Dr. Schuyler C. Graves, "Unique Case of Puerperal Sepsis;" Dr. J. E. Westgate, "Case of Ovariotomy;" Dr. J. J. Mulheron, "Antiseptic Midwifery;" Dr. L. E. Maire, "Exophthalmic Goitre."

These papers have been varied and instructive, and the discussions have been brilliant, logical, and fraught with that knowledge that shows the progressive American physician.

Several members have been kind enough to present some of their interesting personal patients.

For the benefit of my successor, as I personally know what hard work it is for the Secretary to get papers, etc., I would recommend that each member endeavor in some way to do some work for our Society. If they do not feel disposed to read a paper, they should at least make a personal effort to procure some outside talent to entertain the Society.

I wish to return thanks for the personal favors that I have received at the hands of individual members of the Society, without which I would have been unable to accomplish my work. Again I wish you to accept my heartfelt thanks.

E. B. SMITH, *Sec.*

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After election of officers the Society adjourned to the banquet hall, where the retiring President, Dr. Armstrong, had a supper waiting.

During the repast, which consisted of dainties and flowing wine, the following gentlemen were called upon to respond to toasts: Dr. Hal C. Wyman, "The Physician and the World's Fair;" Dr. K. Gunsolus, "Scotch Stories;" Dr. E. W. Jenks, "Physicians' Relations to Each Other;" Dr. E. B. Smith, "The Good of Our Society;" Dr. Morrison, "What Doctors Say of Each Other;" Dr. L. E. Maire, "The Good in a Medical Society;" Dr. Dakin, "A Little Speech;" Dr. H. Honner, "My Duties at Home and in the Society."

The wee hours had come before those at the banquet board adjourned.

E. B. SMITH.
Secretary.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., OCT. 25, 1893.

Editorial.

"FASHION IN PHYSIC."

Perhaps in no branch of science is fashion more paramount than in medicine; and that this will continue until such time as all medical attainment is put upon the same high plane by a universal standard of education, elementary and actual, must be obvious. The rank and file of the profession look for results chiefly, and for all prior and intermediary seem to be content to follow the leadership of the few, and these few as often as otherwise not of the best, but made up of the self-advertising and political class. Thus, in the interest of science and progress it behooves the earnest student to scrutinize both the character and participation of those who assume the rôle of teachers; to closely inquire into the interests involved in each individual case and the relative relations of such interests; to examine carefully the practical as well as the theoretical side of every question.

Fashion does not constitute fact. At the present time a great deal is asserted of which next to nothing is really known. Such is the state of bacillary pathology for one thing; and, while we must accept the genius of Koch, Pasteur, *et al.*, it is only greatly to be feared that their errors will overshadow their virtues when they come to be embalmed in history,—that their fate will be that of Philippus Aureolus Theophrastus Bombastus von Hohenheim, best known in these days as Paracelsus, the "Prince of Charlatans," to whom, nevertheless, medicine is deeply indebted in many ways. *Apropos* of this, Professor Rosenbach, of Breslau,* remarks:

"The practitioner has had to take a back seat while the test-tube, microscopical slide, and other instruments of precision wielded by mere theorists are usurping his powers and functions. The tuberculin fiasco is still fresh in the memory of all. . . . . Any school-boy can capture and gloat over a few bacilli; nevertheless it still taxes to the utmost the skill of an experienced physician to secure prolongation of life and comfort for a consumptive patient.

"Also with regard to cholera, it is senseless to base the diagnosis upon the presence of the comma bacillus and to be thus compelled to await the results of bacteriological tests before knowing what to do. Yet, during the recent German invasion, it frequently happened that patients *were dead for a day or two* before the practitioner was permitted, by grace of the authorized State bacteriologist, to 'know that the disease was cholera.' Moreover, the extraordinary fatality of cholera morbus is very suggestive of the possible fallibility of elaborate diagnosis which disregards all chemical evidence."

And yet, in spite of overwhelming adverse testimony regarding the production of disease by bacilli, and the constantly accumulating evidence that the morbid germs are more probably *sequels*—testimony that is derived from the thinking, student portion of the profession,—the masses, those who have reputations to make, success and practice to advertise, and are eager to be ever on the top wave of popularity, rush headlong regardless of consequences, and assert things that are not and, moreover, never have been, in their anxiety lest some one else may establish priority or distance them in the race. With such all processes of reasoning are ignored. The calm, dispassionate sifting of evidence is here unknown. All negatives are stigmatised as "partisan" or "old fogy." Nothing is learned from experience, and many failures only render them more eager to promote the interests of a new fad. Such has all the excitement of the gambling table, luring its devotees on and on until there is little to look back upon but an ill and misspent life and the tombstones of those who have been the unwitting victims of their folly.

Theories and fashions are not needed; neither are they wanted. The *cacoethes scribendi* as a means of self-advertising necessarily leads to both. Medicine, being an inexact science, as it must ever continue to be, demands stern facts segregated from all con-

* Der Kommabacillus die medicinische Wissenschaft und der ärztliche Stand."—Münchener Medicinische Wochenschrift, No. 43, 1892.

siderations of usage or fashion. Theories and fashions have too often interfered with progress, and within a decade hundreds of phthisical and cholera patients, to say nothing of sufferers from other diseases, have gone down to untimely graves, sacrificed to fads, self-interest, second-hand conceit, and pernicious medical and lay literature.

As a piece of natural history bacteriology is a most interesting study; but even this study is of little interest or value where the student is a tyro in natural history and biology. Four hundred years has not sufficed to fully and certainly evolve the life history of the horse or the dog, in spite of their domesticity and the thousands of careful observers. How much more futile then must be the pathology based upon the life histories of myriads of microscopical organisms of which nothing is known save under purely artificial surroundings and as the result of most cursory examinations.

Fashion is a stern mistress, but an unsafe one. She permits only of strict obedience, and demands that all reasoning which promises a negative be left severely alone. For these causes anything that tends toward fadism that is not the result of careful sifting, *pro* and *con*, and the exercise of the utmost caution and common-sense, based, moreover, upon a thorough medical education, cannot but be pernicious when applied to the science of medicine.

CAUTION AND COMMON-SENSE IN THERAPEUTICS.

This subject presents two phases—one from the standpoint of the teacher, the other from the standpoint of the taught. So far as medical teaching in the United States is concerned, it is to a great extent in its infancy and, admittedly, mediocre. Under such circumstance it is to be expected a great deal of loose assertion and empirical promulgation will obtain without due shadow or substance. A large proportion of the space in medical periodicals, too, is occupied by those animated by a desire to "see themselves in print," or to secure such advertising as the pages of the precise periodical will afford. An "axe to grind" is, perhaps, oftener the rule than the exception, and the rapid multiplication of journals has necessarily attracted a horde of inexperienced writers, those who have a reputation to make, and "are neither hay or grass"—to employ a bucolic aphorism—and consequently write with all the dogmatism of ignorance.

For these reasons it behooves every medical man to be conservative in accepting the teaching offered by the medical press. It is his duty at all times to weigh well every statement made—to consider it in all its pathologic, physiologic and therapeutic bearings—in other words, to digest thoroughly; any statement that does not evince a palpable reason for its making had best be left alone. Thus, the chief demand upon the medical man is that he shall at all times exercise to the utmost his faculties of caution and common-sense.

We are led to these remarks by a recent circumstance. A paper appeared in a medical journal on the use of three acrid, epispastic, caustic agents in dermatology; and while we do not pretend to insinuate that this *tria juncta in uno* is not of the utmost value in the diseases defined by the author, the prolixity of his article and the looseness of statements made were such as to tend to lead into error the incautious and inexperienced.

Only a few days since, a medical man who perused this article, neglecting that caution which should form the chief part of the *armamentarium therapeuticum*, ignoring also his innate common-sense (and he ordinarily possesses no small share of this article) that with a little reflection would have caused a different decision, prescribed for a simple erythematous eruption involving the whole arm, shoulder, and chest (an eruption derived from the inspection of some hundreds of cheeses and irritation produced by the cheese-mite), a solution of equal parts of the aforementioned three caustics to be applied, undiluted, "to the whole surface" at bedtime.

The application was made; the patient walked the floor in agony all night, and during the following day and succeeding night, in spite of all palliatives. The arm became swollen to thrice its natural size and presented the aspect of a most severe burn; and the chest and shoulder were in equally bad condition. A severe diarrhœa set in, evincing the toxic action of one of the ingre-

dients of the remedy, and which, moreover, was most fortunate in that it relieved the kidneys and probably prevented more serious complication. It was a week before the patient was able to leave his room or to bear any clothing upon his body, and when he had fairly convalesced was greatly emaciated —he lost eleven pounds during the first thirty-six hours of his torment!

What excuse can be offered for such a prescription under such circumstances? The plea that authority was derived from a standard medical journal would avail little from a legal or medical standpoint, even were it strictly true. The author also is entitled to a share of blame because of the looseness with which his statements were made, owing not to want of knowledge, but to lack of perspicacity and literary style. A more careful perusal of the paper on the part of the prescriber would have prevented so serious an error, but unfortunately the communication was too verbose—drawn out to an unconscionable length considering the subject, through many pages—and the reader, evidently dismayed at its prolixity, had merely scanned and sought for the "cream" thereof, which, failing to properly appreciate or digest, he certainly had no business to use. One moment's careful reflection upon the theoretic and physiologic relations of the drugs employed, and of their action singly upon the skin, would have been sufficient to negative writing the prescription.

The lesson is one we may all take to heart in greater or less degree; it teaches the folly of "shooting at sparrows with fortification ordnance," and of accepting statements that are not fully borne out by collateral evidence and backed by common-sense, simply because they find place in medical literature. Indeed, this particular instance would appear to be aggravated by the fact it is a "far cry" from a simple erythema to an eczema marginatum, the latter being the malady treated by the original author of the prescription.

HE RICHLY DESERVES IT!

At a regular meeting of the Medical Association of the District of Columbia, held Oct. 3d, formal charges were preferred against William A. Hammond for a breach of medical ethics, the offense being his interest in or ownership of certain trademarks. As reluctant as we are to augment the notoriety of a man only too eager for any form of publicity, however vulgar or disreputable, (which he considers as so much dead-head advertising), we are constrained by a consideration of the best interests of the profession to announce the commendable action of this Association, and to review the evasive, false, and impudent rejoinder of the culprit as printed in a Washington daily. It is the same old strain, with a few changes introduced into his previous diatribes against Lewis A. Sayre, Ernest Hart, Dr. Leonhardt, Parke, Davis & Co., and others.

This time the proceedings against the "Animal Extract" man are prompted by "jealousy!" He "never appeared in competition with medical men of the District." According to his idea, "there is no breach of ethics in dealing in trademarks or advertising." The "Detroit druggists" are, naturally, at the bottom of this—although, to our certain knowledge, the manufacturers to whom he alludes knew nothing of the contemplated expulsion until apprised by the daily press.

The offender takes good care to repress certain material parts of the truth—for example: that he and the Columbia Chemical Co. are virtually one and the same; that he owns $250,000 worth, or the large majority, of the entire watered stock, in return for the transfer of his trademarks; that he manages the concern and directs its advertising; that he receives from it a handsome salary and allowance for traveling expenses.

Alleged nerve specialist in Washington —nostrum vendor in New York! The pretense is too transparent, and we are pleased that the Washington Association is shrewd enough to pierce the humbug, and brave enough to assail one who has too long enjoyed immunity from criticism as a result of the dread inspired by his shameless, slanderous, and venomous pen.

PHYSIOLOGICAL ACTION OF ATROPINE.

Dr. H. C. Wood summarizes the action of this drug as:

1. A peculiar stimulant of the intellectual cortex, continually paralyzing the same:

2. A respiratory stimulant:

3. A paralyzer of inhibition in the spinal cord and inhibition of the heart and intestines:

4. A powerful vaso-motor stimulant:

5. An elevator of the bodily temperature:

6. A cause of efflorescence upon the skin.

Speaking of it as a prophylactic of scarlet fever, he remarks that some years since a professor of theory and practice in one Philadelphia college taught belladonna and atropine were powerful prophylactics of scarlatina; another professor in another college in the same city taught the precise opposite. In a certain boarding-house a number of students were harbored; scarlatina broke out, and every student of the first-named professor took belladonna, while those of the latter left it severely alone; and many of the first lot took scarlet fever, while none of the latter were infected.

Professor Wood says, further, he is convinced of the value of belladonna in sore throats, when given in doses of five or ten drops of the tincture every two, three, or four hours, according to the susceptibility of the case. But its greatest use is in shock, and here its action is that of a vaso-motor stimulant. In shock, alcohol is of little value, since, while stimulating the heart, it paralyzes the other blood-vessels. Strychnine and digitalis may help under such circumstances, but the one drug which will summon whatever there is in the vaso-motor resources is atropine. Dr. Wood also believes in every case where loss of nerve power is the central condition, belladonna is the remedy.

IS OPIUM A DEADLY DRUG?

What is the truth regarding the Oriental opium traffic? Is opium a deadly and noxious poison, or is it a mild and pleasant stimulant narcotic, no more harmful to the human system than tobacco and far less dangerous than alcohol? For some weeks all England has been discussing this topic both in the newspapers and in the House of Commons; natives of India have given testimony both verbal and photographic. The result appears to be, after all, that the subject is just as much mooted as it was at the end of the last outbreak of debate two years since.

This question regarding opium periodically crops up in the same way. In the House of Commons there is a radical religious party that possesses no small influence in Liberal councils—and this is the wing of the party that usually gives little trouble to its leaders, though whenever church, missionary, or morality matters come up in conflict with economical finances this wing demands to be soothed and conciliated. This explains why Mr. Gladstone recently considered the subject worthy of his eloquence, and why Mr. Webb moved an inquiry into England's Indo-Chinese opium traffic with a view to the suppression of the growing of the poppy in Great Britain's Eastern possessions. The controversy has been prolix and tiresome beyond measure, yet during it came out the fact that in India there are about 460,000 acres devoted to cultivation of the poppy, and that the revenue of the Anglo-Indian Government from exportation of opium into China is about $20,000,000 annually. Thus it may readily be seen that the suppression of poppy culture seriously threatens the revenues of the Anglo-Indian Empire, and is apt to create serious discontent among certain native populations whom Great Britain can least afford to offend and who are habitual opium-users.

While Mr. Gladstone did not venture to commit himself by an opinion upon the moral aspect of the question, and while he apparently leans toward the anti-opium view, he did make certain important statements. He declared:

"I have the greatest respect for the motives of Christian missionaries, but I am not sure that they are men of calmness combined with comprehensiveness of view. I think the Government is bound to inquire into the state of public opinion in India. I observe that strong promoters of the anti-opium movement are not apt to give any weight at all to public feeling in India."

He concluded by moving, as a substitute for Mr. Webb's motion, that a Royal Commission be appointed who shall, "without restriction, go into the whole matter with thorough inquiry."

Mr. Curzon, who has given no small portion of his life to the study of the opium question, and moreover is an authority upon

all Indian matters, protested against the literature circulated on the question of the opium traffic by those who are inimical thereto. He declared "such literature is a scandal; is wholly sensational, and much of it false; yet week by week and year by year constituents are flooded by it, and it is not surprising it has had some effect upon ignorant and innocent men."

"Appeals are constantly being sent to members of the House of Commons urging them to vote against 'this great National sin.' So far as I am personally concerned I have always given a clear and consistent answer to these appeals, for I have said boldly that I will vote and speak in favor of this 'National sin.'

"Out of a population of 220,000,000 in British India, only 400,000 are opium-smokers, or a proportion of 1 in 550. I wish I could say the same of the liquor traffic among Anglo-Saxons. Opium has been used as a stimulant and as an article of daily diet from time immemorial in tropical countries. No doubt, taken to excess it is dangerous to the constitution, just as excessive smoking is dangerous; but if taken in moderation it is harmless and sometimes beneficial and necessary."

In this view Mr. Curzon was sustained by Abdalla Meer Ali Dharamsi, an eminent Mohammedan lawyer of Bombay, who wrote an article to the London Times ably defending the pro-opium view. He declares he has watched and studied opium-smoking and opium smokers in Bombay and in his native province of Cutch, and that as compared with alcohol it does no harm at all; the quantity does not increase with the habit; opium-users generally at fifty and eighty years of age look robust and happy; he believes the habit to be so rooted that prohibition will necessitate smuggling which, in the case of a drug so small and so desired, cannot be suppressed. He, moreover, adds the significant fact that suppression, if truly effected, would be speedily followed by an immense increase in the use of alcohol, which to all dark races is most deadly—they cannot afford wine, and drink only to be drunk.

In addition to this exhibition there has been at least a score of communications from Indian officers, natives of high rank, and Englishmen who have carefully studied India and its people during long residence there.

Thus far it seems that the pro-opium faction has had the advantage, as it has given calm and specific arguments, while the other side tends to abusive generalities without any form of specification. One amusing feature, however, of the anti-opium crusade was the exhibit of a missionary's pictures of forty decrepit and emaciated opium-smokers —which, however, was offset by another series of photographs representing one hundred middle aged "opium fiends" who had used the drug all their lives and were still robust and smiling.

Whatever the truth may be, $20,000,000 of revenue is involved, and the opium war with China showed long ago what the policy is apt to be where revenue is involved.

Book Notices.

THE DICTIONARY OF MEDICAL SCIENCE. By Robley Dunglison, M. D., LL. D. Edited by Richard Dunglison, M.D. New (twenty-first) edition. Cloth; imperial 8vo; pp. 1181. Philadelphia: Lea Bros. & Co. Price, $7.00.

This volume, we are pleased to note, presents all the features that have made Dunglison's Dictionary so popular in the past, and in addition the necessary improvements to bring the work fully up to date. It contains a full explanation of the various subjects and terms of anatomy, bacteriology, biology, chemistry, dentistry, dermatology, dietetics, gynæcology, hygiene, laryngology, medical jurisprudence, medicine, obstetrics, ophthalmology, pathology, pediatrics, pharmacology, pharmacy, therapeutics, etc., etc.

No previous edition has embodied so many additions and changes, and it is apparent the editor has been greatly aided by the many lexicons that have appeared since the last edition of this work was given the public. A perusal of the book will convince anyone that it will continue to retain its well-earned place in the medical library for a long time to come, if for no other reason than the fact it is thorough, concise, and convenient, offering all the practical advantages with none of the objections that pertain to other lexicons of like scope.

GRAY'S ANATOMY.

Another edition, the thirteenth, of this

standard work is announced for early publication by Messrs. Lea Brothers & Co. It is hardly too much to say that this has been the most popular of all anatomical text-books since its first appearance in 1851. Its text has been revised successively by the foremost anatomists of each decade, and the present edition embodies the changes essential to make it represent the latest advances in the science of which it treats. The illustrations have always been noted for their clearness; and their size renders it possible to print the names of the parts directly upon them, thereby indicating not only their individuality but also their extent—a most important matter. Colors have been made use of to secure additional prominence for certain parts. Notwithstanding these improvements, the constantly increasing demand has justified a reduction in the price of the colored edition.

A Treatise on Ophthalmology for the General Practitioner. By Adolph Alt. Cloth; 8vo; pp. 315. Published by J. H. Chambers & Co., St. Louis, Mo.

The second and enlarged edition of this well-known work is a concise and accurate citation of the facts pertaining to ophthalmological science as they appear to-day, and in such form as to be useful and accessible not only to the specialist but to the practitioner of general medicine and the student. The chapters on anatomy and physiology are especially good. The different pathological states to which the human eye and its appendages are liable, are taken up and exploited in a most thorough way. The various operations are delineated in a manner that cannot fail to be understood. Altogether this is a readable volume, one that doubtless will secure able support from the profession.

D. M. C.

Theory and Practice of Medicine. By James T. Whittaker, M.D., LL.D. Cloth; 8vo; pp. 825. New York: Wm. Wood & Co. Price, $5.75.

It is with pleasure we note the publication of a new work on Practice. The author is a gentleman of wide reputation and recognized ability, and possesses an experience admirably suited to the production of such a work as this. The treatise includes whatever there is of substantial value in recent advances in diagnosis and therapeutics, and indeed brings the subject thoroughly up to date. It will be observed Dr. Whittaker has given special attention to relations and diagnosis in his discussion of the infections concerning which our knowledge has of late received important additions. We can recommend the work not only as an excellent text-book but as a practical assistant to the busy practitioner.

A Text-Book on Ophthalmology. By Wm. S. Norris, M.D., and Chas. H. Oliver, M.D. Cloth; 8vo; pp. 641. Philadelphia: Lea Bros. & Co. Price, $5.00.

This, a most practically and carefully edited work, is, we understand, the product of seven years' careful labor. Thus is offered to the practitioner and student a volume which represents the most advanced state of ophthalmology in the clearest possible manner; it embodies not only the results of extended personal experience, but likewise an extensive acquaintance with the vast and rich literature of this branch of medical science. The illustrations, 360-odd in number, five of which are colored, are unusually excellent and in thorough keeping with the literary material. We bespeak for this volume a permanent position as a text-book and work of reference.

Notes and News.

The Moderate Use of Alcohol.—

Sir Dyce Duckworth recently summarized his conclusions on the physiological effects of alcohol on the human organism as follows:

That it had not been proved that the moderate use of alcohol was hurtful to the inhabitants of Europe and was necessarily prejudicial to civilized nations:

That the most enlightened nations had, as a rule, made use of alcoholic liquors:

That there existed no enlightened testimony to show that the moderate and simultaneous use of alcohol and of sound food could injure the organs of the human body; on the contrary, there is ample proof such use is usually beneficial; and that the legitimate and rational use of a thing by no means justified its abuse:

That for many people, complete and con-

tinual abstinence from alcohol was not at all to be recommended, and that it was recognized that such a course of conduct employed as an exemplary measure had never, with any people, succeeded in bringing about the disappearance of intemperance:

That the majority of the posterity of drunkards and of persons of an ill-balanced nervous system would do well to abstain altogether from alcohol, or at least before partaking of it to consult a competent and experienced physician:

That the use of impure and adulterated alcoholic drinks is attended with many consequences more or less disastrous; and that the extreme physiological limit which the individual constitution can support ought rarely to be reached, most certainly not passed:

That the young should be instructed, as part of their education, to recognize the proper and legitimate use of alcohol, and to moderate and subjugate their appetites.—*Lancet* (London).

Rumination.—

Dr. P. Nacke, of Hubertsburg, Germany, believes rumination in the human subject is a symptom of neurasthenia. He personally gave no evidence of neurasthenia until past thirty years of age, when he began to suffer from wakefulness, headache, vaso-motor irritability, involuntary and temporary twitching of muscles, etc.; he also became pale and anæmic. For a number of years he observed rumination. Generally a short time after dinner the food was regurgitated involuntarily, irrepressibly and without premonitory signs, with the greatest vehemence, without a sensation of oppression or qualmishness, and so as to fill the mouth. When the food was ruminated and swallowed again, the process was repeated up to six times and more, the taste of the food being always unchanged to the last. Fluids were rarely regurgitated alone. These symptoms appeared periodically, the frequency being in proportion to the nervousness, depending also on the quantity and quality of the food. The functions of the stomach were good, perhaps a little slow; constipation absent, no hyper-acidity, no dilatation. This caused the conclusion that rumination is the result of excitability of the nerves of the stomach, and this motor reflex neurosis a symptom of neurasthenia.

A Medical Parody.—

The Atlanta Medical and Surgical Journal credits the following to Dr. C. W. Tompkins, of Jasper, Fla., who publishes upon the reverse of his statements:

Once upon a midnight dreary,
The doctor slumbered weak and weary,
And all the town could hear
Him snore.

While he lay there sweetly napping,
Suddenly there came a tapping
Like a ramgoat madly rapping
His hard head upon
The door.

"Get thee up," a voice said loudly,
"Come in haste," it added proudly,
Like a man who owned a million or
Much more.

But the doctor never heeded,
Back to dreamland fast he speeded;
For such men as that he needed
In his practice
Nevermore.

For long months that man had owed him,
Not a cent he'd ever paid him,
And the doctor now will dose him
Nevermore.

Deaths in the Profession Abroad.—

Among the members of the medical profession in foreign countries who have recently passed away are Dr. Libbrecht, of Ghent, one of the leading oculists in Belgium, aged 61; Dr. O. Rosenberger, a well known bacteriologist and the oldest practitioner at Kösen, aged 87; Dr. Jose Vargas, a leading physician of Bogota; Dr. Boéchat, of Fribourg, author of numerous papers on the Structure of the Thyroid Body, Alcoholism, the Antiseptic Treatment of Retropharyngeal Abscess, Iodoform in the Treatment of Goitre, etc., aged 46; Dr. Cramer, Professor of Psychiatric Medicine in the University of Marburg, aged 62; Professor Sommerbrodt, of Breslau, well known as a prominent advocate of the creasote treatment of phthisis; Dr. Blanche, a leading French alienist, aged 73; Dr. Gaston Dupré, of Brussels, founder of the Belgian medical journal La Clinique, and one of the first advocates of Listerism in Belgium; and Dr. Schrader, Surgeon-General

of the Fifth German Army Corps, and formerly Physician in Ordinary to the Emperor Frederick.

Singular Method of Infanticide.—

Such was reported at a recent meeting of the Medico-Legal Society of Paris. An infant of five months died without having shown any symptoms of previous disease. Nevertheless suspicion was aroused and the body exhumed some sixteen months after burial. No traces of poison were discovered, but the intestines were found to contain some eight pieces of a blackish-grey substance which completely blocked the passage. Careful examination showed that these pieces were sponge, and Professor Caseneuve gave it as his opinion that they were administered to the child for the purpose of killing it. This opinion was founded partly upon the fact that the pieces of sponge presented a cut surface, and also upon the knowledge that in certain parts of the country the custom prevails of killing stray dogs by placing in their way pieces of sponge soaked in grease, which when swallowed swell up inside of the intestines and so cause death. The jury accepted this view and brought in a verdict of guilty.

Cruel Anti-Vivisectionists.—

The aigrette in a lady's bonnet is the crowning beauty of an egret mother. The collector—and each nesting season fifty men are employed in this business—waits till she is on her nest, her little breast full of peace, and the young just hatched, so that the mother will not leave them easily, though alarmed. He ruthlessly seizes her, tears off her crowning plumes and her wings, and then throws her down, gasping, torn, and fluttering, to die beside her little ones, who, deprived of her fostering care, die also miserably. Lately, at a meeting of anti-vivisectionists, it was a curious instance of "the evil wrought through want of thought" that many of the ladies protesting against the cruelty of vivisection wore these very egret plumes in their bonnets.—*Cornhill Magazine.*

The Pan-American.—

Of the Pan-American Congress the Medical Record says: "Perhaps the most important point of domestic interest is the proposed enlargement of the American Medical Association so as to have it assume a Pan-American character. While the idea was a novel one, it seemed to meet with a cordial reception, and out of it conditions may arise of importance to the entire medical profession of the Western hemisphere." "As is usual in all gatherings fathered by the American Medical Association, the New York City representation has been conspicuous by its absence. There has been a fair attendance on the part of the younger men, but the older men have scarcely been represented at all. Is it not time that a different order of things should be brought about?"

Mississippi Valley Medical Association.—

This Association held its meeting in Indianapolis, Ind., on the 4th, 5th, and 6th inst. There was an unusually large attendance, and the session in every way was one of the most successful in the history of this Association. The next annual meeting will be held at Hot Springs, Ark.; and the officers for the succeeding year are: Dr. X. C. Scott, Cleveland, Ohio, President; Drs. Leon Straus of St. Louis, Mo., and Frank Lydston of Chicago, Ill., Vice-Presidents; Dr. F. C. Woodburn, Indianapolis, Ind., Secretary; Dr. Geo. J. Cook, Indianapolis, Ind., Treasurer; Dr. T. E. Holland, Hot Springs, Chairman of Committee of Arrangements.

Rectal Feeding.—

Dr. Henry F. Campbell does not agree with Flint's view of the process of intestinal digestion; he does not believe that digestion in either rectum or colon is at all contemplated. On the contrary, he asserts that instead of the digestive principles descending to the food in rectum or colon to digest it, the food ascends to the fluids in the small intestine, and is there digested and prepared for absorption by the proper organs in precisely the same manner as after oral ingestion.

The Cholera.—

Late reports show cholera is very widely distributed throughout Europe and still slowly spreading. It exists in Russia, Roumania, Bulgaria, Galicia, Austrio-Hungary,

Turkey, Greece, Italy, Spain, France, Belgium, and the Low Countries. In Great Britain isolated cases have occurred at Grimsby, Hull, Bradford, Rotherham, Sheffield, and Belfast—yet these may have been only exaggerated cases of cholera nostras.

Onychophagy.—

This is the name given by a French physician to the morbid habit of nail-biting. He finds it very common among French schoolgirls—sixty-one out of 207 in one school—and queries if the deformed finger-ends and nails so commonly seen are results of the custom?

On the hither side of the Atlantic the habit is more generally regarded as an indication of secret and filthy practices.

Medical Advertising.—

The specialist who cautiously resorts to advertising should reflect that while the boldest charlatans sometimes succeed in acquiring a fair business by the most outrageously false claims to superior skill, the educated physician who seeks to attain prominence in this way usually only shakes the confidence of his best friends, and loses the support which he most needs.—*Ohio Medical Journal.*

Value of Compulsory Vaccination.—

The good effects of a compulsory law regarding vaccination are seen in the statistics of Prussia, in which country for six years prior to the enforcement of vaccination the deaths from smallpox averaged 85 per 100,000 of the inhabitants, while from 1875 to 1886, after the law came in force, the yearly average was but 2 per 100,000.—*The Sanitarian.*

Mistaken Identity.—

"Will come on first train, but in meantime let her have apis," telegraphed the physician. He and the lady operator "no longer speak as they pass by."

Abortion, Causes of.—

Dr. Th. Parvin gives as the most frequent causes: "Syphilis, displacements, and excessive sexual intercourse."

William B. Towles, late Professor of Anatomy and Materia Medica in the University of Virginia, is dead.

Therapeutic Brevities.

Arsenic in Chorea.—How large doses may be given? How long should the drug be continued? Should it be kept at the point of tolerance for weeks without intermission, and what unpleasant effects are likely to follow its administration in large doses? are pertinent.

How large doses of Fowler's solution may be given? As a rule, children from seven to fifteen years of age will bear larger doses of arsenic than adults. So far I have never found it necessary to give very large doses to children under six years. In a number of instances I have given 20 drops of Fowler's solution three times daily to children from ten to fifteen years old, for a week or more at a time. In the majority of instances the point of tolerance is first reached when the dose has been gradually increased to some six or seven drops thrice daily. After stopping the arsenic for two or three days, or until all unpleasant effects have passed away, and resuming its administration at six- or seven-drop doses, as the case may be, the next point of tolerance will be attained when the dose has reached ten or twelve drops thrice daily. In most instances all twitching will have stopped at this time. If such be the case, the medicine is resumed after two or three days, at this dose, but now it should not be increased. It should be given at the dose tolerated when the twitching has stopped, for a week or ten days, then discontinued for two or three days, and resumed again at the full dose; the dose is now lessened one drop each day until four-drop or five-drop doses are reached; stopped again for two or three days, and again resumed at 5-drop doses. Arsenic, as a rule, should not be continuously given in full doses for more than eight or ten days at a time. By observing this precaution, I have been fortunate enough to avoid the ill-effects that some physicians have reported from the continuous use of full doses of arsenic.

How long should the administration of arsenic be continued after all twitching has stopped? As a rule, it should be continued for a month or more after all choreic symptoms have ceased, but not in full doses of toleration for more than a week or ten days, when it should be stopped for a few days; then the dose should be gradually reduced, as recommended.

The next question: Should the large tolerated doses be continued for weeks without intermission? has already been answered in the negative.

What unpleasant effects are likely to follow the administration of large doses of arsenic, even when the point of tolerance has been established by gradually increasing the dose from day to day? Seguin states that he has never seen any serious effects follow therapeutic doses of arsenic, although he gives some children as many as twenty-five drops of Fowler's solution thrice daily. Whether he takes the precaution not to use the drug continuously for more than a week or ten days at a time, I do not know. So far, I have not seen any cases of neuritis folfowing therapeutic doses or arsenic. Dr. Shattuck, of Boston, reports two cases of multiple neuritis following large doses of arsenic given for the relief of chorea. Dr. McGarvey, of San Luis, Colorado, informed me by letter a few days ago that he recently had two children paralyzed in the legs after taking large doses of arsenic for chorea. These were evidently cases of multiple neuritis. Neither Shattuck nor McGarvey state how long their patients had been taking arsenic without an intermission in the administration of the drug. Several other physicians have reported cases of neuritis following the administration of arsenic for the relief of chorea.—Dr. J. T. Eskridge, in *Medical News.*

Thyroid Feeding in Psoriasis.—At the last meeting of the British Medical Association, Dr. Byron Bramwell read a paper on the influence of thyroid feeding on the nutrition of the skin, especially in cases of psoriasis. His attention had been drawn to the improvement of the skin in patients under thyroid treatment for myxœdema, and, hoping to aid the nutrition of the skin in psoriasis, he made trial of this remedy in selected cases of long-standing psoriasis. To thoroughly test the treatment, all other remedies were omitted and a small dose of the thyroid given daily. In all his cases a visible improvement occurred after a few days' administration. The inflammatory redness was lessened and there was considerable desquamation of cuticle over the affected parts. In one patient the eruption grew worse, in two there was no benefit, but in every other instance there was marked and continued improvement. In one case only has there been a slight relapse. "All the patients who were thus treated had the disease in a chronic and obstinate form, and had been subjected to all kinds of ordinary treatment, but without success." Dr. Arthur Davies also reported independent observations on two cases of psoriasis which had improved very rapidly under thyroid treatment, one reaching a complete cure. The uncertainty of obtaining permanent results in treating psoriasis should restrain undue confidence in this new remedy, but the careful selection of cases and the exclusion of other treatment during the trial lends force to Dr. Bramwell's report, and further trial will be watched with interest.—*Boston Medical and Surgical Journal.*

Creasote to Determine the Gravity of Tuberculosis.—C. Burlureaux, in Gazette Hebdomadaire de Médecine et de Chirurgie, warns practitioners against uniform doses of creasote in tuberculosis, and also calls attention to the fact that the degree of tolerance of the drug reveals in a precise manner the gravity of the disorder. He says:

"The subject has been studied under four categories. Under the first are included those patients who tolerate the drug in a most perfect manner—under the influence of the drug no untoward symptoms are exhibited, but, on the contrary, there is a marked improvement in appetite, and the general strength and bodily weight are increased; the tubercular lesions, goth general and local, are manifestly stayed in their progress. The second includes those whose tolerance is none the less marked, but in whom, although there is general improvement, the local lesions are not influenced for the better. Patients of the third category have, at first, a tolerance for creasote, but, as in those of the second category, the lesions continue in their development; suddenly, and without apparent cause, marked intolerance comes on, and from this moment the prognosis becomes bad; a patient that exhibits this secondary intolerance of the drug may be considered as hopeless. Under the fourth category are those patients who, from the very beginning, cannot tolerate the remedy; in such the prognosis is similarly bad."

The author insists that, in general, creasote has, in tubercular disease, as much value from a prognostic, as has been claimed for Koch's remedy from a diagnostic, point of view.

Hydrastinine in Uterine Hæmorrhage.—Hydrastinine may be employed in those uterine hæmorrhages which are traceable to a pronounced congestion of the uterus—the often very profuse menorrhagias of spinsters, in whom there is no pathological change in the genitals, etc. In some of these it is possible to obtain a permanent result.

Also in hæmorrhages which have their pathological cause in endometritis, but here its action is only palliative.

For prophylactic or intermenstrual use, hydrastinine is useful before or during the first returning profuse menstruation after an abrasion of the uterine mucosa. This menstruation, usually occurring after six weeks, is often very profuse. In the very cases where it is of great importance to prevent further profuse hæmorrhage, this is rendered possible by hydrastinine if employed several days before the expected period and, if necessary, continued during the menstruation.

In menorrhagias caused by fixed retroflexion, where reposition is not possible, hydrastinine is a commendable remedy.

Uterine hæmorrhages caused by a change of the adnexa and surroundings offer a large field for the successful use of hydrastinine; to these belong menorrhagia and metrorrhagia with pyosalpinx, oöphoritis, ovarian tumors and exudations. The cause of the trouble is not influenced by the remedy.

Climacteric menorrhagias are much diminished by faithfully carrying out a hydrastinine treatment.—Dr. Gottschalk, in *Brooklyn Medical Journal.*

Sir Joseph Lister on Carbolic Acid.—After twenty years' experience Sir Joseph Lister renews his allegiance to carbolic acid. He declares it is not only a more efficient surgical germicide than corrosive sublimate, but is much more efficient in cleansing the skin. It has a powerful affinity for the epidermis, penetrating deeply into its substances, and mingles with fatty materials in any proportion. Corrosive sublimate, on the other hand, cannot penetrate in the slightest degree into anything greasy; hence those who use it require elaborate precautions in the way of cleansing the skin. All of this is unnecessary with carbolic lotion. He does not even employ soap and water, but trusts entirely to the phenol.

There is now in market a new antiseptic, a combinatiou of thymol, encalyptus, and boric acid, and known as Thymol Eucalyptus Antiseptic, which, though admittedly a trifle slower in action than carbolic acid, is equally efficacious, and more pleasant to use. It is a true germicide.

Palliative Treatment of Carcinoma Uteri.—Dr. J. Lucas-Championnière recommends that the purulent discharge be removed by injections of water as hot as can be borne, and to which a little permanganate of potassium has been added. Immediately after, the carcinoma should be dried with absorbent cotton and dusted with a powder composed of equal parts of benzoin, magnesium carbonate, and iodoform. In case of hæmorrhage the hot injections may be followed by packing with antiseptic gauze, superimposed upon the dusting. He also recommends a palliative operation to prevent hæmorrhage, such as curetting and thermo-cauterization. The antiseptic powder should be newly applied every day.—*Revue Générale de Clinique et de Thérapeutique.*

Radical Cure of Varicose Veins.—Ernest La Place advises for the obliteration of varicose veins, ligation of the long saphenous at the saphenous opening, and the short saphenous between the heads of the gastrocnemius, followed by elevation of the limb and gentle compression with raw cotton and flannel bandage.

The advantages claimed for this method are:

It deals with the varicosity at wholesale:

Is harmless, easy, and with the aid of cocaine painless:

It insures ultimate obliteration of the impaired veins.

The cure seems apparent in from two to three weeks.

Quinine Muriate and Ammonium Muriate in Pneumonia—The effects desired, and as a rule produced, by quinine muriate in combination with ammonium hydrochlorate, are: (1) A decided reduction of temperature; (2) marked diminution in the frequency of the pulse; (3) decided moist condition of the skin, perhaps intensified to free perspiration; (4) relief from pain and the sensation of fullness in the chest; (5) diminution of cough and of the tenacious, bloody character of the expectorations. In short, not only is there checking of the fever, but of all evidence, general and local, of pulmonary engorgement and inflammation.—*Vratch.*

Frequent Epistaxis.—Dr. Alexander Harkin, of Belfast, Ireland, recommends the following mixture in frequently recurring epistaxis:

℞ Potassii chlorat., grammes 18.00.
Ferri perchloridi, grammes 3.00.
Aquæ, grammes 300.00.

Sig.: Two tablespoonfuls three times daily.

—*Le Semaine Médicale.*

Death from Salol.—At a recent meeting of the Biological Society of Paris, M. Girodé exhibited two lumps of salol weighing 1.55

grammes and 1.25 grammes, which had remained undissolved in the stomach of a woman for twelve months.

The woman died in the Beaujon Hospital, and when the autopsy was made the injected condition of the great curvature of the stomach attracted attention, and when the viscus was opened the two masses of salol were found.—*L'Union Médicale.*

Cocaine in the Nasal Cavities.—Porter has discovered that the unpleasant and even poisonous symptoms that occasionally follow the local application of strong solutions of cocaine in the nasal and buccal cavities may be entirely prevented by combining the drug with resorcin. This combination has the further advantage of adding the antiseptic, astringent, and hæmostatic properties of the latter drug to the cocaine.

Immunity against Diphtheria.—Bordach has recently proved, to his own satisfaction at least, that the serum of dogs rendered immune against diphtheria by repeated inoculations, may be employed to render rabbits, guinea-pigs, and moles likewise immune. He further declares that "infected animals inoculated with subcutaneous injections of dog serum suffer no untoward results."

Dangers of Koch's Tuberculin.—It is now definitely known that the tuberculin of Koch is an extremely unsafe medicament to experiment with, as it is exceedingly apt to induce the lesions of parenchymatous nephritis. Dr. Chauffard has observed cases of this character, and Grancher, Martin, Arloing, Rodet, and Courmont corroborate this experience.

Liquor Sedans in Amenorrhœa and Chlorosis.—This condition, so common in school girls and teachers, is due largely to nervous exhaustion, and, where iron fails to relieve, the nervines and uterine tonics contained in liquor sedans often prove signally effective.—*New Zealand Medical Journal.*

Cannabis Indica.—Dr. Suckling declares normal liquid Indian hemp in one- to three-drop doses, thrice daily, is almost a specific in the insanity of women due to mental worry or moral shock; also often proves of incalculable value in mania and melancholia.—*Medical Chronicle.*

Medical Progress.

A Question of Microbes.—Dr. Alfred Hinde says: "All cases of purulent conjunctivitis are of microbic origin and due to Neisser's gonococcus." Now I had binocular purulent conjunctivitis last summer that originated from hot alkali dust. I saw another case only a few weeks ago that was not of gonorrhœal origin, in the family of my nearest neighbor, the subject a child, nine months of age. Being personally acquainted with all the family surroundings, and the peculiar isolating circumstances surrounding the child before the disease, I am as equally assured as in my own case of its character. I will readily admit that purulent conjunctivitis is oftenest caused by gonorrhœal infection, but will never admit that *all* cases are so caused. I do *not* admit, though, that the *gonococcus* is ever the cause of conjunctivitis, nor of urethritis. Some of our most eminent physicians claim to find true gonorrhœa without the gonococcus. I would like to have that phenomenon explained, if phenomenon it is, else I cannot accept the microbe theory of gonorrhœa.

It seems that we are going wild over microbes. Though only an humble country practitioner, and fully realizing the seeming egotism in the prediction, yet I do predict that in ten years from to-day we will laugh at our folly in ascribing diseases to microbes. Do not understand me to say I do not believe in microbes. We must believe in what we see. I believe the bacillus tuberculosis is as much of a scavenger as the vulture. Too many of us talk in a positive way about "inflammation," "bacterial infection," etc., when we do not know what we are talking about; *yet some of these very men are teachers.*

On one of the hottest summer days of 1891 I was called to dress a scalp wound inflicted upon one railroad section hand by another. The wound was both contused and lacerated, and was made by a powerful blow with the back of a shovel. The man had on an old slouch hat at the time, and, though the blow did not cut the hat, the scalp was split in three directions from a common centre to the extent of one and a half inches each way from said centre, thus laying the skull bare over an area of at least two square inches. Now, with an old, greasy, slouch hat mashed into the wound, and with a scalp crusty with several weeks' accumulation of dirt and the oily excretions of the skin, we surely had the ideal wound for "bacterial infection." You will of course say we had a suppurating wound very slow of healing. We did not

have anything of the kind! I put some boric acid in warm water, using an old, dirty tin pan as container—could get no better—and washed off the blood and as much dirt as possible, and shaved the wound margins and closed with silk sutures. Powdered with boric acid, put on gauze, cotton, and plaster. The result was "union by first intention," no pus. Do not understand that I disbelieve in asepsis; I carry it out fully when circumstances permit. Asepsis is simply cleanliness, and "cleanliness is next to godliness," so we are told. We should be clean if only from force of habit. The point I wish to make is, that it is silly to go into spasms over contamination from contact with some unsterilized student or clinical assistant, as we often see some of our learned professors do.

Dr. Chas. Nammack, in his article in the Medical Record on "Imperforate Hymen," declares: "The patient made a speedy and satisfactory recovery. The case seems to show that the danger formerly attributed to rapid evacuation of these accumulations can be obviated by asepsis."

Now would not the statement have been better made if he had said: That if death had resulted it would have been from *shock* caused by the sudden withdrawal of so large an amount of fluid; or from hæmorrhage from tubal rupture; or from traumatic peritonitis—peritonitis from tubal rupture, or some similar traumatism? It is to be supposed the patient would have died without operation, so it was the operation and not the aspesis that did the work.

I once performed a laparotomy in which my assistant wiped the saliva from the patient's mouth with his fingers and immediately thrust them in the abdominal cavity. The wound healed with a temperature not higher than 101° F., and with no pus except a few drops at a stitch-hole. Such an assistant as the above is not a very desirable one, but we have a few such.

Truly the microbe is passing through a period of persecution; but we will some day "arise and call it blessed."—Dr. V. Berry, in *Medical Record.*

Liebreich on Koch and the Comma Bacillus.—Prof. Liebreich, in a paper entitled "The Methods of Examining Cholera Dejecta," takes issue with the methods of Koch, and reaches in his examinations entirely different results. He asserts on good grounds that peptone cultures are unreliable. The so-called "red reaction" of cholera is found in other than cholera cultures, and does not take place at all in a peptone culture when other bacteria are present in conjunction with cholera vibrones. The animal experiments of Koch are considered unreliable, and the clinical pictures claimed to be produced by Pfiffer by bringing a culture into the abdomen can be produced by introducing other than cholera bacilli. Liebreich says the cholera bacilli of India, even as shown by Koch, are entirely different from those in Germany and France; that the comma- often change to rod-shaped bacilli; that others frequently assume the comma form; and comma bacilli have been found in abundance in the intestines of persons in apparent health. He insists that the treatment of disease by blood-serum is unscientific; that it is in the cells of which the body is built up that a disease generated must first cause a weakened condition, of which the disease is the outgrowth—or in other words, back of the bacilli, permitting their formation, as they in their molecular changes produce the fatal poison of the ptomaine, is a weakened cell condition, the cause and remedy of which are of the utmost importance in the prevention of any malady, be it cholera, typhoid fever, or diphtheria. If, as we think, the pathogenic microbes are injurious only by their poisons, and infection is only intoxication by the bacterial poisons, and there must be a peculiar condition of the cells to permit the germs once introduced into the system to develop and pour out their poisons, does not the road to the extermination of all infectious diseases run not only in those sanitary measures which will prevent the formation of those microbes which, taken into the system through the air or water or by contact, breed disease, but in so fortifying the cells that even if introduced they find no food for development in the cells, but are overcome by a superior vital force?—*New York Medical Times.*

Medicine and Surgery among Animals.—Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek dark and airy places, drink water, and sometimes plunge into it. When a dog has lost its appetite, it eats that species of grass known as dog's grass, which acts as an emetic and a purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. An animal suffering from chronic rheumatism always keeps, as far as possible, in the sun.

The warrior ants have regularly organized ambulances. Latrielle cut the antennæ of the ant, and other ants came and covered

the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded, it stops the bleeding by placing its hand on the wound, or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth.

A dog, on being stung in the muzzle by a viper, was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it. This animal recovered. A terrier hurt its right eye. It remained under a counter, avoiding light and heat, although it habitually kept close to the fire. It adopted a general treatment, rest, and abstinence from food. The local treatment consisted in licking the upper surface of the paw, which it applied to the wounded eye, again licking the paw when it became dry.

Animals suffering from traumatic fever treat themselves by the continued application of cold, which M. Delaunay considers to be more certain than any of the other methods. In view of these interesting facts, we are, he thinks, forced to admit that hygiene and therapeutics as practiced by animals may, in the interest of psychology, be studied with advantage.—*Farm Folks.*

NORMAL AND PATHOLOGICAL ANATOMY OF THE APPENDIX VERMIFORMIS.—Prof. Ribbert, of Zurich, after a macroscopical and microscopical study of over four hundred cases and cadavers, found the average length of the appendix to be about 8¼ cm.; and the average, according to age, as follows:

New-born	3⅝ cm.
Up to the 5th year	7⅝ cm.
From 5th to 10th year	9 cm.
From 10th to 20th year	9⅛ cm.
From 20th to 30th year	9½ cm.
From 30th to 40th year	8¾ cm.
From 40th to 60th year	8½ cm.
Over 60 years	8¼ cm.

The greatest length of the appendix, then, is between the ages of 10 and 30; it is relatively larger in the new-born than in the adult—its relation to the large intestine in the former is one to 10, whereas in adults it is one to 20. Obliteration of the appendix is known, but, instead of accepting the view that this is pathological, he believes it is a process of involution. He found it obliterated partially or completely in ninety-nine cases out of the four hundred examined, *i. e.*, 25 per cent. The following table illustrates the percentage of obliteration according to age:

1 to 10 years	4 per cent.
10 to 20 years	11 per cent.
20 to 30 years	17 per cent.
30 to 40 years	25 per cent.
40 to 50 years	27 per cent.
50 to 60 years	30 per cent.
60 to 70 years	53 per cent.
70 to 80 years	58 per cent.

Another table shows that the shorter the appendix the more frequent the obliteration. The processus vermiformis has usually very little contents. Klebs has attributed this to the fact that the normal musculature regularly voids its contents. All kinds of foreign substances may be found in the appendix, but the most frequent are fæcal stones, which are the commonest cause of perforation-peritonitis. He found fæcal stones thirty-eight times in the four hundred cases examined. Usually more than one stone is present. The occurrence of fæcal stones is equally frequent in both sexes.—*Virchow's Archives.*

VIABILITY OF THE NEW-BORN.—We may infer that a child has lived before and after its birth:—1st, when the diaphragm reaches only to the fifth intercostal space; 2d, when the lungs more or less fill the thorax; 3d, when the ground color of the lungs is broken by insular marblings; 4th, when the lungs are found to be able to float in water; 5th, when a bloody froth exudes from the cut surface of the lungs on pressure; 6th, when the air-cells are visible to the naked eye; 7th, the existence of milk, sugar, starch, or medicine in the stomach, determined by appropriate chemical tests, and by the presence of fæcal matter other than meconium in the lower intestines, shows that the child has lived.—Dr. Evans, in *Dominion Medical Monthly.*

THE MYSTERY OF ICE-CREAM POISONING is a reproach to the professions of medicine and chemistry. Year after year, with mournful reiteration, there are many reports of fatal cases. The deaths from this source must immensely exceed those from hydrophobia, but Pasteur institutes spring up like mushrooms in every country, whilst the deaths of the victims of poisoning by the cream are passed over in silence. Would it not be well to look into this matter? Would it not be well to prove or disprove the theory of Dr. Hull, that the common ice-cream freezer is often an electric battery decomposing toxic products by means of the mixture acting as an electrolyte?—*Medical News.*

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Original Articles.

GYNÆCOLOGICAL CLINIC—MICHIGAN COLLEGE OF MEDICINE AND SURGERY.*

BY PROF. EDWARD W. JENKS.

Case 1—Uterine Curettement.—Mrs. B——, æt. 40, but calls herself "about 18," is one of those patients who may be said to be troubled with surgico-phobia, if we are to judge by her own account, for by that it seems that she has been subjected to various surgical operations but is still hankering for more. A prominent symptom in her case is a persistent hæmorrhage from the uterus, not profuse however, but sufficient to act as a constant drain upon her vitality and strength.

Uterine hæmorrhage towards the close of menstrual life is a symptom of great significance, and one not to be neglected, as only a most thorough physical examination will reveal the cause. I would emphasize this for the reason that it is at this period that malignant diseases of the uterus manifest themselves, and if an early diagnosis is made of the existence of such, a surgical operation may result in relief; but it is a lamentable fact that women thus affected do not, as a rule, seek medical advice until after repeated hæmorrhages, when frequently it is too late for anything but palliative treatment.

Other sources of hæmorrhage may be benign tumors of the uterus or ovaries; but one of the most frequent causes, and one which may occur during any portion of menstrual life, is that condition of the mucous lining of the uterus designated as fungoid degeneration or hyperplastic endometritis. I am able to exclude by previous examination the existence of cancer of the neck of the uterus, nor have I reason to believe there is malignant disease of its body. The patient being anæsthetized, I use Simon's speculum to expose the uterine neck to view, and hold it with a double tenaculum.

I now proceed to make forcible dilatation of the uterus with Ellinger's dilator. This effected, I pass in the curette and, moving it gently about and then withdrawing, discover several small mucous growths have been brought away, indicating the source of blood loss. As the horn of the uterus, most frequently the left, is usually the placental site, and consequently the point where fungosities are most liable to form, I curette both horns with thoroughness, bringing away a quantity of these growths. I use the cutting curette, and, as is usually the case, much of the thickened mucous membrane is curetted away. Now, this surface being thus exposed might serve as a nidus for septic infection if no precautionary measures were taken.

A preventative treatment which has been much in vogue, and moreover efficacious, is to carry into the uterine canal, on an applicator, a saturated tincture of iodine, and thoroughly apply over the entire mucous lining. This not only arrests the hæmorrhage, but generally produces uterine contractions – this last-named condition may be somewhat objectionable, as it is usually desirable to have free outlet and drainage from the canal. The more modern treatment which meets this demand is, to pack the uterus with antiseptic gauze, which I proceed to do—I use borated gauze, believing it fully as efficacious as the iodoform gauze, and less objectionable as to odor. This will be left *in situ* for at least twenty-four hours, and then removed.

Case 2 - Perineo-Vaginal Restoration.– Mrs. C——, æt. 28, is the mother of two children, the younger two years of age. Each childbirth was an instrumental delivery with torn perineum, for which condition she says she has already had two surgical operations. It will be observed as she lies in the dorsal position that, although there seems to be a fair perineum, it is only integumentary, for

* Stenographically reported for the MEDICAL AGE.

as she makes expulsive effort the vaginal walls protrude beyond the vulva. Passing a finger into the rectum, the movement of the digit is seen as a posterior protuberance, and the enlargement observed to the front is simply the anterior vaginal wall with the bladder behind it. In this patient, then, there is both a rectocele and a cystocele.

On separating the walls of the vagina, it is seen that the neck of the uterus almost extrudes and is denuded of its epithelium. Any surgical operation which this patient may have undergone has not restored the torn muscles or fascia, or given any adequate support for either the anterior or posterior walls or the uterus; but the latter, resting in the little pocket formed by the integumentary perineum, has macerated in its own and the vaginal secretions, hence its denuded condition.

Now, the remedy lies in a surgical operation which shall restore these parts as far as possible to their normal condition, and at the same time furnish a support for the pelvic viscera that have become dislocated by reason of the sagging of the pelvic floor. An ordinary perineorrhaphy would be of no special benefit; an operation upon the posterior wall which will afterwards afford adequate support to the anterior vaginal wall is the one demanded. I therefore proceed to make the operation which has been designated of late "flap-splitting," but not the so-called flap-splitting operation of Tait.

The dissection which I make is within the recto-vaginal septum. First nicking with sharp-pointed scissors each labium anteriorly to designate the front margin of the flap, then inserting these scissors near the juncture of the skin and mucous membrane, I proceed to dissect within the septum as high in the vagina as the redundancy of its walls are observed, and to either side; this dissection is made without the scissors being once withdrawn. To avoid entering the rectum, two fingers are passed therein; and that the flap may not be buttonholed, the anterior wall is held up by a retractor. I sometimes use a knife made especially for this purpose, but much prefer scissors with the blades completely overlapping each other, and both inner and outer edges ground equally sharp. The scissors thus serve the purpose of a knife, but do not have the keen cutting edge of the latter; there is not that loss of blood which would follow the use of the knife. The next important step in the operation is the insertion and adjustment of the sutures. An ordinary description of this procedure will not give one a proper conception of it; but, following the operation, the method of insertion and the purposes of each one will be observed. The assistant lifts up the flap by means of a tenaculum; then with two fingers in the rectum to guard against wounding it, starting in with a Peaslee needle at a distance of one-third of an inch back from the denuded surface and turning the point well toward the left buttock, the handle correspondingly as far in the direction of the right, I push it deeply into the tissues of the anterior ischio-rectal space, then upwards and, finally, inwards along the recto-vaginal wall, until it has been carried just above the highest point of dissection in the centre, at which location the point is brought out; counter-pressure with a blunt hook permits of pushing the needle further with ease and with less strain upon the septum. As soon as the eye of the needle appears, a loop of the carrying thread is pulled out and a suture of silkworm-gut passed through it. When the needle is withdrawn, one half of the first stitch will be *in situ*. The needle is then introduced in the same manner upon the opposite side and the upper end of the suture threaded into the loop, and when withdrawn the suture is in place.

For the second stitch, the needle is started about a third of an inch above the first, and its point directed first outward in the same manner as with the first suture. But not quite so much lateral tissue is taken up this time, as the needle does not make so wide a side sweep, but passes more directly up along the recto-vaginal septum; when it has reached the upper third of its course, it crosses the first suture and comes out on the vaginal mucous membrane about one-half or two-thirds of an inch above the central highest point of dissection. After withdrawing the first half of the suture, the needle is introduced in the same manner upon the opposite side for the second half of the stitch.

A third stitch is introduced about one-third of an inch above the second, being carried

along beneath the denuded surface until it reaches the junction of the septum and the flap, when it enters the latter at about its upper fourth, and burrows across to the opposite side and down the denuded surface to the outside.

The fourth and fifth stitches are introduced under the denuded surface as far up as the juncture of the septum and flap, when they pass under the latter without burrowing into it, and to the opposite side.

Sometimes a sixth stitch is introduced—it is not necessary in this instance, but I introduce with a thin flat needle a catgut suture at the anterior point of dissection through the entire edge of the flap.

All the sutures are now picked up and slackened enough to permit the free irrigation of the parts with sterilized water, and as they are brought together and tied it will be seen that there are no raw surfaces exposed, that the introitus of the vagina presents altogether a different appearance, and that the anterior wall no longer extrudes.

There is occasionally some bleeding from the under surface of the flap, and to prevent further hæmorrhage and to hold the flap in close apposition to the freshly denuded parts, I pass a silk suture considerably outside the sutures and over the flap. This compression stitch is left in position about twenty-four hours before removal. The silkworm-gut sutures are taken out in about seven days, the bowels being moved the day preceding. After the stitches are out, the patient should stay in bed for two or three weeks more, in order to ensure perfect union and solidity of the parts. There is no special need of vaginal irrigation, as there are no exposed surfaces within the canal. The external parts are covered with boracic acid, that is renewed from time to time. The catheter will be necessary for a few days, care being taken that no urine comes in contact with the wound.

Case 3—Double Pyo-Salpinx, Hæmatoma; Cæliotomy.—Mrs. S——, æt. 22, married about one year, has been complaining for several months of severe pain, and at one time was so ill that her life was despaired of. In describing her symptoms she very clearly recounts the characteristics of peritonitis. The pain of which she complains is chiefly in the right side of the hypogastrium, extending to the right thigh and down to the popliteal region. The marks of blisters or other means of counter-irritation upon the abdomen and along the entire inner surface of the right thigh can plainly be seen; these demonstrate the not uncommon mode of treating symptoms alone, the method of the imperfectly trained physician or one of the common practices of the charlatan.

Having previously examined the patient, I have determined upon a surgical operation. Before coming to this decision, I carefully examined the pelvic organs by the vagina and rectum and by conjoined manipulation, and was able to discover an enlargement in the region of the right ovary which is apparently about the size of an orange. This tumor seems to be somewhat movable, and, judging by this sign alone, its removal will be an easy task; but one cannot foretell concerning the ease of any surgical operation within the abdomen prior to section. I am unable to discover for a certainty any enlargement or diseased condition upon the left side.

I cannot elicit a clear history of this case, so that it is impossible to judge whether or not this patient has had the specific disorder that is the chief if not the only cause of pyo-salpinx. From the history and the physical examination I can only say there may or may not be pus within any of the uterine appendages.

Now a few words as to some of the requirements of an abdominal surgeon. Thanks to Lister and others, abdominal surgery has been robbed of its terrors and the mortality reduced to almost *nil*. But our views of sepsis and asepsis have changed with time and the increase of knowledge, and Listerism no longer prevails, though all honor is due to that distinguished surgeon who was the first to demonstrate that surgical asepsis is possible. Various germicides have been used and highly commended, only to be relegated to oblivion; there is no bactericide that can ever supply the place of thorough cleanliness. Bichloride-of-mercury solutions cannot take the place of, and are of much less importance than, soap, water, and the nail-brush freely used. Antiseptic solutions so often used may sometimes cover up filth of the kind that causes disease.

The patient being anæsthetized, and the instruments and every appliance sterilized by heat—the patient herself also rendered, as far as possible surgically clean—the operation is proceeded with.

The incision through the abdominal walls and into the peritoneal cavity is about two inches and a half long, which can be elongated if requisite; the lower portion of this opening is close upon the bladder. The peritoneum is very much thickened, evincing signs of previous inflammation. As I reach my fingers down in the region of the right ovary, I feel a soft fluctuating tumor but find in addition a chaotic mass of adhesions which are firm and numerous. It is clearly demonstrated as I tear loose these adhesions that this is not one of those easy cases which can be rapidly concluded, as these adhesions must be carefully separated lest irreparable damage be done to the intestines or other viscera.

I find it impracticable and unsafe to enucleate this growth from the broad ligament after the usual method, with a small pedicle, and therefore I shall be obliged to tie off in two sections this large mass, which includes the tumor, the immensely elongated tube, and a small part of the much thickened broad ligament. I transfix the base in two places and ligate the mass with the quilt stitch. Aside from the tumor is an unusually long Fallopian tube, fully five inches in length, doubled in upon itself, and as it is brought outside of the abdomen it is accidentally ruptured, pus exuding therefrom. The tumor proves to be a hæmatoma.

Examining the left side, unhappily I find, after separating many adhesions, another pus tube. The ovary itself presents no indication of disease; but as one can be of no service without the other, I transfix and ligate the entire mass near the left horn of the uterus after the usual method, and thus remove both ovary and tube. Inasmuch as there has been some bleeding, and possibly some pus has escaped into the abdominal cavity, it is flushed with copious quantities of sterilized water. The wound is closed by silkworm-gut sutures which embrace the walls, muscles, and peritoneum. It is not material that the edges of the peritoneum be brought into apposition, as the sutures are at least three-quarters of an inch from its cut edges, thus causing this serous membrane to be overlapped, and it will become agglutinated within twenty-four hours. The external wound is covered with boracic acid, plain gauze placed over the abdomen, and a firm broad bandage applied.

The patient will be given no food and but little drink for twenty four hours, and unless the pain is severe no opiates or anodynes of any kind. In about thirty six hours a saline cathartic will be ordered, and if it cannot be retained, will be repeated by the rectum. This saline will be given for the purpose of thoroughly draining out the pelvis by absorption and, in a measure, preventing adhesions by inciting peristalsis.

Case 4—Supposed Abdominal Tumor; Pregnancy.—Mrs M. S——, æt. 24, mother of two children, the younger two years old, complains of swollen limbs, and an abdominal tumor which has troubled her for some little time and gradually increased in size. The abdomen is somewhat enlarged, but yet from the regularity of menstruation she is uncertain as to whether she is pregnant or not. Menstruation ceases as a rule when a woman becomes pregnant, but, like all general rules, this has its exception. With the symptoms of which this patient complains, it is essential to differentiate between pregnancy and any of the abdominal tumors which are frequently found. She presented herself some days ago and received treatment in the dispensary for the œdematous condition of the extremities. Analysis of urine failed to reveal any disorder of the kidneys.

Exposing the abdomen to view, it presents the pear-shape outline peculiar to either pregnancy, certain ovarian cysts, or fibro-cystic tumors of the uterus. It is almost needless to mention the differentiation between these and ascites, yet I will mention one point. Percussing in the median line, there is no resonant sound; on the contrary, there is dullness. In ascites there would be resonance, but in either pregnancy or abdominal tumor, dullness in the median line—as is found here. Making a vaginal examination, I find the distinctive indication of pregnancy, by *ballotement*. By applying the stethoscope to the abdomen, although the abdominal walls are quite thick I distinctly

hear the uterine *bruit*, but as there is an unusually large quantity of amniotic fluid I am not able to distinguish to my satisfaction the sounds of the fœtal heart. The appearance of the breasts and nipples is of but little significance in the case of a woman who has already borne children, but if she were pregnant for the first time the areola would be an important diagnostic sign. The case is unmistakably one of pregnancy close upon the fifth month.

Detroit, Michigan.

THE THERAPEUTIC ANTAGONISM OF CERTAIN NATURAL DISEASES.*

BY M. SEMMOLA.

It is an axiom of ancient experience that one infectious disease, ensuing during the course of another disease already prevailing, produces cure of the latter, when it is an affection regarded as incurable. In proof of this therapeutic antagonism between the various diseases, can be cited the most diverse and most reliable clinical observations. All the world has heard of the cures of cases of malignant and benign tumors in consequence of an attack of erysipelas (Norton): Russian and English literature contain many cases of carcinoma and sarcoma which were caused to vanish by erysipelas; and these are the more remarkable since the erysipelatous infection did not exist at the beginning of the development of the neoplasm. But what is of special importance to the ætiology of the problem is the fact that the growths thus healed did not return, hence permitting the deduction —and one, moreover, emphasized by several French clinicians—that the erysipelatous infection must have produced a salutary modification in the composition of the blood, thus destroying the carcinomatous diathesis. In likeness to the foregoing it has been reported that in many cases a rheumatic affection has disappeared after the relief of some infectious disease which had supervened during the course of the former. Thus, also, are known cases of diabetes mellitus which were wholly relieved by an access of cholera or by a severe erysipelas.

All these clinical cases of the therapeutic antagonism of diverse diseases have been explained in accordance with more or less absurd or, assuredly, incorrect hypotheses, to say nothing of the incredulity with which the facts were received by some physicians.

Other physicians and surgeons, on the contrary, have recently sought to produce artificially the natural process, inoculating the erysipelatous virus, for example, in several cases of sarcoma and carcinoma, without, however, achieving the desired cure.

The experimental progress of the laboratory in the treatment of biological problems respecting artificial immunity from certain infections, to-day constrains the clinician to attribute great importance to the ætiology of the possible therapeutic antagonism between individual diseases, and I will proceed to set forth briefly my views of this aspect of scientific pathology, inasmuch as they accord perfectly with the ideas which I have maintained for twenty-five years, and which find their complete confirmation in clinical facts and, in the present scientific investigations so far as the latter were prompted by an unprejudiced desire to discover the truth.

The first deduction which we must draw from the clinical fact of therapeutic antagonism between individual diseases, is the certain conviction that the New Medicine, or the so-called experimental medicine—the medicine of the laboratory, in other words—made a gross mistake in presuming (under the delusion that it had discovered the fundamental pillar of clinical medicine in the laboratory, and with the aid of the microscope alone) to pronounce definitely and to exclude all negatives.

This wonderful influence exerted by erysipelas on the cure of various diseases, especially sarcoma and carcinoma, is nothing more than the full corroboration of a great and fundamental axiom which forms the basis of the laws of life—the axiom, namely, than in the manifestations of life the ground of each activity and function is chemical action, and that the incessant transformations observed under physiological as well as pathological conditions are in reality naught save chemical processes, whose consecutive stages may be as variable as the number of individuals is great; and that the only reason why heretofore we have not been able, and never will be able,

*Translated by Joseph Helfman.

to formulate clinical laws (which may actually be regarded as mathematical laws, as is the case with chemistry and physics) resides in the fact that we are completely ignorant, and will eternally remain ignorant, of the physico-chemical constitution of the various principles comprising the living organism.

The factors involved will often be simple molecular modifications; perhaps also there will be no chemical reagents enabling us to disclose these differences, for chemistry would then be constrained to furnish us with reagents which, after the manner of the microscope in histological research, would be endowed with a capacity for discovering the slightest and most trivial differences prevailing in the constitution of the various living primary substances. From a biological point of view, however, even these molecular modalities in the composition of any single primary substance, as for example, albumen, constitute deviations more than sufficient to produce modification of nutrition or, if you will, of the morphology of an organism. What wonder then if an infectious process, as that of erysipelas, disturbing the equilibrium of the chemical functions of an organism, becomes a means of restoring an already perturbed bio-chemical activity, thus causing a return of the normal nutritive process? What is quicksilver doing when it causes the disappearance of an enormous gumma—a remedy resorted to for the first time the day after a consultation in which many celebrated surgeons were of the opinion that the case was one of sarcoma susceptible to operation? Similar cases occur every day—whenever the clinician is assailed by the doubt whether a certain tumor is, instead of a sarcoma, a syphilitic gumma. In very loose language it is declared that mercury and iodide of potash are solvent agents, as though, forsooth, they would dissolve the substance of which the gumma consists! But we might inject mercury and iodide of potash at pleasure into the interior of such a gumma, excluding the rest of the organism, and be assured such gumma would never disappear. The reason is a very simple one. The mercury must come in contact with every molecule of the organism; it must modify the direction or trend of cellular nutritive activity into harmony with the bio-chemical changes produced by it throughout the intra-organic sphere. Then and then only will the gumma disappear, for not until we seal up its source and act upon the process of metamorphosis does it cease to build itself up incessantly anew. Its heterogeneous substance then undergoes definite transformations and, as a result of physiological necessity, is borne away by the circulation. And, indeed, the bio-chemical modifications conditioned by infections agencies may give rise to more striking morphological results, and it goes without saying that these bio-chemical changes are as a rule injurious and often irreparable, while, on the contrary, with a disease already prevailing in consequence of pre-existing and more or less profound disturbance of nutrition, the result may prove beneficial and curative.

Unfortunately this ætiology, so valuable to us and so wonderful to laymen, does not enable us to establish experimental laws and make prophecies. It comprises a series of unknown factors or elements, which—I repeat—are as numerous as mankind, whether we have in view the cause and the inner nature of several diseases such as sarcoma, carcinoma, etc. (which are termed malignant simply because they produce death), or whether we refer to the bio-chemical character of the modifications produced by infectious diseases in the organism—changes which at times, and by means of a mechanism that we do not know, may be serviceable and beneficent (Jenner's inoculation). And in such cases the scientific problem is so complicated, and the number of unknown factors so great, that it is no occasion for wonder if the supervention of an erysipelas produces cure of sarcoma in Individual A, whereas after artificial inoculation into Individual B it proves inert. This disparity of therapeutic result is indeed a logical and inevitable consequence of its special bio-chemical nature.

In the specific treatment of acquired infections, such as malaria and syphilis, quinine and mercurial preparations, it is true, always effect cure, and the question is only one of form or time. But the specific action of the remedies in question is never absent whatever may be the bio-chemical constitution of the various individuals, for the reason that

the cause of said infections as well as the remedies employed to combat them both remain ever foreign to the physico-chemical constitution of the blood and the blastemic secretions. So far then as the organism is concerned, they always represent heterogeneous substances, while this is not the case with casual or intentional inoculations against spontaneous and not acquired pathogenic predispositions of the organism. In the latter case, the virus with which the vaccination is made must radically modify the direction of the nutritive function of the organism, participating intimately in the composition of the latter; hence the individual bio-chemical conditions form an integral part of the problem and represent an unknown factor which may set at naught the beneficial action of the new virus.

Advanced contemporary science, with all its treasures of accomplishment, is not in position to render intelligible to us the result of those vaccinations performed by Nature when exercising her mysterious powers; but, as I have before stated, it enables us to comprehend perfectly why the cure in the one instance, and the incurability of the other, constitute two facts which are consequences of one and the same unknown law—just as one building which collapses and another which remains upright afford a striking proof of one and the same mechanical law!

In face of the profound ignorance by which we are and ever will be confronted, respecting the true physico-chemical constitution of living organic matter and its infinite characteristic alterations in each individual, the conviction must finally gain ground that the laboratory belongs in the background, and that those who seek the actual advance of the clinic must direct their chief attention to the rigid observation of clinical facts as presented by Nature, endeavoring to establish with the greatest possible accuracy the conditions of the existence of these facts, and not building castles in the air on the basis of laboratory experience—theories which, much as they may be enriched and perfected, will never be able to sustain the truth respecting the endless gradations in the alterations of organic matter in various diseases. For thirty years I have maintained this fundamental principle, repeating it in every strain:

Experimental medicine will never be in position to reproduce in the laboratory the diseases confronting us in Nature; and therefore every so-called scientific construction of the evolution of this or that disease, which is based on the investigations of the laboratory, will remain a hypothetical structure built upon at least three-quarters of falsehood, hence forming a dangerous guide for the physician who would regard it as the true key to treatment!

We may lull ourselves with no illusion in this respect, and I hope that rising physicians will satisfy themselves on this score, that they may not later become the murderers of their kind in the name of progress and—what is even worse—of that art which is ironically termed the healing art!

In this connection I desire to recall an old idea which remains ever new so far as its bearing on the clinic is concerned, and emphasize its disastrous tendency. The infatuation of some clinicians with respect to experimental medicine and its "endless" power, goes so far that when they are confronted with a distinct and convincing clinical verity—established as such conclusively by clinical observation, but eluding the corroboration of the laboratory on account of the limitations of our means of investigation—the infatuation of these physicians and clinicians, I say, goes so far that they repudiate the clinical fact because experimental proof is not forthcoming! For example, they take the various diatheses, notably those which are hereditary. There is no nurse who does not know now how great is the influence of these diatheses (in our day termed "culture soil," *i. e., ignotum per ignotum*) on the development of the diseases, whether they are diseases which depend upon functional disturbances produced by noxious influences in the external world, or those of microbic origin. What are diatheses? Experimental science knows nothing of them, and can know nothing; the clinic, on the other hand, informs us that they are indubitably special alrerations of matter peculiar to each individual—for I believe that each individual presents a particular alteration, even if the latter be so minimal that it does not reveal itself in the form of clinical symptoms

peculiar to and characteristic of each diathesis. To us, however, these alterations remain unknown: the laboratory cannot reproduce them save in the case of some simple-minded *agent* who announces through the press, to the amusement of his readers (as recently occurred), that he has succeeded in producing gout artificially! Since now we do not know the nature of these bio-chemical alterations characterizing the diatheses, and cannot determine their presence by reagents or, still less, reproduce them experimentally, are we on that account to repudiate them? By no means. They constitute the true fundament of the clinic, because they are the starting-point for the obtaining of the valuable data afforded us by the clinical observation of individual differences presented, in turn, by one and the same morbid process conditioned by the same cause. Hence they yield the most important basis for the treatment of the morbid processes the nature of which is far more susceptible of determination in the light of the general condition than in that of local examination.

With this fundamental knowledge of general pathology, we become ever more convinced that the infectious agents of acute diseases, producing more or less profound modifications of the pre-existing bio-chemical alterations constituting the diatheses, must inevitably change the direction of those special nutritive disturbances of the organic cell which are characteristic of each diathesis.

Look, for example, at something we have all had before our eyes for three years, namely, the sequelæ of influenza. Whatever may be the exciting cause of this terrible, acute, infectious disease, it is certain that it produces a considerable modification in the bio-chemical functions of metamorphosis, and renders it possible for many pre-existing affections—or diseases present in the germ or in a latent condition, or already present in the form of morbid process but still in the initial stage - to receive a christening and an impulse from the newly introduced pathogenic activity; so that three years ago, in a clinical lecture on "Influenza," I emphasized the fact that this infection may be regarded as a positive reagent, indicating the degree of health and resistant vitality possessed by the organism.

Thus far no clinical observation has been reported to the effect that after an attack of influenza any pre-existing disease disappeared. But if this were to happen, I should not be surprised. Unfortunately we are thus far enabled to accredit to this acute infectious disease only disadvantages and injuries, for all previous diseases seem to be aggravated by it, and many which have scarcely entered into action receive a speedy and violent impulse.

This curative or noxious influence is subject to no calculation or anticipation, hence is capable of no possible application. With respect to the beneficent and curative influence exerted by an infection, this is a species of vaccination performed by Nature by virtue of which one nail is driven out by another, or, if you prefer, a distinct infection becomes the antidote of another infection. But in what apothecary shop are these antidotes prepared? No one knows! Koch declared that he had found or discovered such a remedy for the treatment of tuberculosis. The delusion which he permitted himself to cherish was visibly the result of an error of natural science, for if he had paused to consider that we are in possession of no law with respect to these artificial or, if you will, specific immunities produced in an intra-organic sphere whose chemical composition is entirely unknown to us, he would probably have perceived that the solution of the problem was not accessible by the experimental path, and that consequently this path could only lead to some absurdity.

Despite the theories of many modern pathologists of the laboratory, whether they bear the name of Bouchard or Metschnikoff, I shall never cease to repeat these immortal principles of the true scientific method, which are the glory of Italian medicine, and according to which all the more or less wonderful results obtained in the laboratory by experiments on animals will never be of any use in the treatment of human diseases, for it is absolutely impossible to realize their application to mankind, that is, under absolutely different physico-chemical conditions — whether we have to deal with a physiological or a pathological state.

The one resource left to the clinic, if it would be of service to experimental therapy,

consists in discarding every hypothesis and in concentrating its attention on the rigid determination of clinical types and the infinite gradations or differences presented by various individuals. This rigid determinism is achieved by means of nosographic determinism in coöperation with the ætiology and, so far as possible, confirmed by the control-experiments of chemistry and histological pathology; for the same symptom may reveal endless gradations and modalities, according to the different individuals, and what the chemical reagents of the laboratory do not accomplish will be most clearly illumined by this determinism, thanks to which the morbid symptoms may be compared to the indicator moving over a large quadrant, manifolding and distinctly revealing those most delicate reactions which proceed in the depths of tissue—reactions which no chemical reagent will ever enable us to perceive and which remain appreciable only to the living cell.

TREATMENT OF EPITHELIOMA AND CANCROID ULCERS BY TOPICAL APPLICATIONS, PRINCIPALLY OF LACTIC ACID.*

BY N. L. NORTH, M.D.

At a meeting in Port Jervis, August 27th, 1889, of the Fifth District Branch of the New York Medical Association, the late Dr. W. B. Eager presented a paper on "Observations on the Use of Concentrated Lactic Acid." I now offer a report of cases, with observations thereon, growing out of treatment as suggested by this gentleman.

Case 1.—(1889.) Mrs. B——, widow and nurse, dated her difficulty from the birth of her last child. Complained of excessive leucorrhœal discharge of a muco-purulent, sometimes bloody, character. Examination revealed a large, somewhat indurated os uteri, with a notch or fissure upon one side containing a growth of a spongy, irregular, abnormal tissue of a suspicious, although possibly not as yet, malignant character. The cervix was contracted upon that side through inflammatory induration, causing a tilting of the neck to the side affected. Perhaps the proper treatment would have been to remove the fissure and its contained growth, bring the divided parts into coaptation, and retain them with sutures, etc.; but as that would necessitate the ability to pass a certain time in a hospital with its concomitant expense, which was deemed by her impossible, I concluded to try the effect of lactic acid. This was applied from time to time, with evident good effect; the growth lessened with every application and in the course of a few months was entirely removed. The muco-purulent discharge also became less, ultimately assuming the ordinary leucorrhœal character. Pains in back, limbs, and loins have mostly ceased. She has continued her occupation, and is now, after four years, in comfortable health.

Case 2.—(1890.) Mrs. M——, married, about 45 years of age, and expecting her menopause, was seized with a gradual attack of cystitis which soon became severe. Careful general examination revealed uterine trouble of undoubted cancerous character. She was a very nervous patient, sure her ailment was cancerous, yet afraid to be informed of it; also horrified at the thought of a hospital or an operation. Lactic acid was applied to the diseased mass as far as practicable, still it was evident that the growth and disorganization was more internal than upon the os uteri, as, while it showed at the os, the whole neck (and mouth) of the organ was drawn in like the retracted nipple of mammary cancer. I applied the lactic acid upon cotton wound upon an uterine applicator, carrying it well up into the os and cervix, using it first every day, then every second day, giving at the same time salol in large doses with morphine for the cystitis. After a few weeks' treatment the general symptoms were greatly improved, and as she seemed desirous for a change of air I consented to a few days' recreation in the country, the family to inform me when she returned. Some weeks elapsed, and, hearing nothing of my patient, I called and was informed that she was "dead and buried." Naturally expressing surprise, I was told that when the patient returned from the country, upon the advice of friends, a "specialist" was called who, after expressing some indignation at the manner in which she had been treated, advised immediate operation—

* Read before the New York State Medical Association, Oct. 10th, 1893.

with the result as stated. I was not informed as to the character of the operation. Amputation of the lower portion of the os and cervix could certainly do no good in a case of the kind; and an attempt to remove the entire uterus would certainly be improper, as there could be little doubt of the involvement of the bladder in the diseased condition.

Case 3.—(1893.) Mrs. E—— consulted me for a severe attack of sciataca. General examination of age, history, and condition of the patient resulted in the discovery she had cancer of the uterus involving the os and cervix. The disease had been progressing for several months and was rapidly advancing towards the fundus by way of the mucous membrane; the surrounding tissue and glands seemed not to be involved. I thought it a good case for hospital and operation, but she positively refused. Under the circumstances, I commenced using the lactic acid, applying it freely in its concentrated form upon cotton to the more external portions of the growth; after curetting thoroughly the internal os and cervix, the applicator was carried well up into the uterus as far as the abnormal growth appeared to extend. I made this application every second day for a time, then twice a week, once a week, finally once in two weeks, and less. Improvement dated from the first; the growth shrank and grew smaller with every repetition of the treatment, and when last seen, about a month ago—some eight months since the first application—the os uteri presented the appearance of absolute health, the discharge had entirely disappeared, she was gaining flesh, and cheerful and happy.

Case 4.—Mrs. C—— suffered from caruncular disease of the urethra of many years' standing; the growth was continuous around the entire meatus, and extended well into the canal. Excision, thorough cauterizations, and astringent powders and lotions, had been repeatedly resorted to, yet the growth continued to return—a not unusual history where the growth is anything more than a polypoid sub-sessile tumor which can be easily tied or snipped off. It occurred to me that the spongy, erectile character of the growth would perhaps absorb the lactic acid—which seems to have an affinity for abnormal tissues—and so become disintegrated. The first application proved the supposition correct. The spongy mass gradually assumed a brownish color, and ultimately shrank under this treatment to a small point. Time enough has not yet elapsed to know whether the disease will again return.

Case 5.—Mrs. M—— exhibited well advanced cancerous disease of the uterus, involving bladder, rectum, and the parametrium generally. Injections of a solution of lactic acid corrected the fœtid discharge to great extent, and appeared to give relief to some of the more serious symptoms.

Case 6.—Mr. S——, elderly, of generally good health, presented with some alarm a curious abnormal growth upon his arm, about half an inch in diameter, circular in shape, raised above the surrounding healthy skin, of pinkish hue, consisting of spongy tissue, very sensitive, bleeding easily on being touched. It had a suspicious appearance, and the first question asked was: "Is it a cancer?" I applied lactic acid freely—except upon mucous membrane it does not in the least affect healthy tissue, so that in a situation like this it could be poured freely upon the part desired to be got rid of.

The tumor soon assumed a brownish appearance and gradually shrank in size as we looked at it; a few applications destroyed the growth entirely, and a normal covering of healthy skin took its place.

Case 7.—Miss J——, of advanced age, an inmate of the Brooklyn Methodist Old People's Home, showed me a sore on the bridge of the nose which she said was for many years only a wart and gave no trouble, but recently had begun to ulcerate, and was now giving considerable pain; she was the more anxious about it because her associates complained of a disagreeable odor emanating therefrom. The sore gave all the indications of a rodent ulcer. I again had recourse to the lactic acid, with the result of correcting the odor and arresting at least the process of ulceration. I made the application by wrapping cotton or lint around a wooden toothpick and rubbing the acid into the ulcer with force enough to break up the crusts; and when the acid had been in contact with the morbid mass for a little time, quite a discharge would set up of a brownish, bloody character that would gradually cease, when a

scab would form, all of which seemed to check the ulcerative process for several days. On occasion I would hasten the scabbing process by covering the whole ulcerated surface with powdered nitrate of lead, which seemed to add force at least to the deodorizing effect of the dressing. This case is still under treatment.

I have also used lactic acid in a number of cases of uterine and skin diseases, of both malignant and non-malignant type, with considerable satisfaction; notably upon a severe case of lupus which has been brought to me off and on for a number of years.

Enough has been outlined to indicate the class of diseases which may be treated with this medicament with probable benefit. It would seem that the remedy should be put to further test of its merits, especially in cases in which operative procedures cannot readily be resorted to, and particularly in those, unfortunately numerous, in which operations must of necessity be unsuccessful. Surgical operations which are successful only in the operating-room are not wise, for they do not advance the interests of true science nor yet give permanent popularity or usefulness to the individual operator.

One word more: The action of lactic acid, when applied to abnormal growths, is peculiar; it appears at first to be absorbed by the diseased growth, while it has very little effect upon healthy tissue. There would seem to be a condition of endosmosis and exosmosis going on. The remedy if applied and watched for a moment, seems partially to disappear; after a little more time a liquid of a different color, brownish in hue, and in a larger quantity than that which was applied, will appear. I wish also to emphasize the fact that lactic acid is not a caustic or escharotic; it does not produce an eschar which covers up the malignant process while the diseased action goes on beneath, but seems to penetrate the abnormal cell and change its character, and so holds out the hope that it or something like it may soon be used which shall penetrate a malignant mass deeper than the mere caustic or even the surgeon's knife, reaching the germ of the abnormality and proving at once destructive to the growth and to its cause.

Brooklyn, N. Y.

DISPUTED POINTS IN HYSTERECTOMY.*

BY JOSEPH PRICE, M.D.

The moot questions in surgery grow less as our experiences enlarge and ripen. There are in our science and art some certainties, some points upon which there is unanimity of enlightened opinion. There are, however, also, as in all other sciences and arts, as in all other lines of human enterprise and endeavor, disputed points—disputed, we must take it, from the standpoint of conscientious opinion. These differences are the chief factors, the motor forces, of our advances. Without them, inertia would take the place of our activities. The fact of our advances is not disputed; the lines along which they have been made, direct the way of interesting and instructive study. We have a profound interest in the names and work of those toiling pioneers who have blazed the trees for our guidance to lessen the difficulties of our following. What they have done for womankind will always lie beyond the power of biographical pen to narrate. We would find it difficult to distribute our debt of obligation when we come to consider the great labors, the brilliant work, of McDowell, Kimball, and the Atlees, of Péan, Keith, Koeberle, Hegar, Billroth, Kaltenbach, Kleeberg, Schroeder, Lawson Tait, Bantock, Thornton, and others. We find stimulus in such names and such records for worthy following. They have given us the sublime lessons of their experience. What masters they are—all of them! They represent the genius of science, of practical skill; they have enlarged our resources; they have helped us to make many lives worth living. Some of these men are living to-day, are yet giants at the wheels, yet students in the solution of great surgical problems.

In considering the definitions of hysterectomy we must bear in mind nomenclature. Schroeder's term, myomotomy, is not synonymous with hysterectomy; it is not hysterectomy, but more appropriately applies to simple extirpation of the tumor. Hysterectomy is the removal (Kimball's operation) of the whole body, or any section of the uterus, with tumors inseparable therefrom. Such high au-

*Read before the Philadelphia County Medical Society.

thority as Thornton places within its field all cases in which the uterine cavity is laid open and more or less of its wall removed along with the fibroid; whether one or both ovaries be also removed is a matter of no consequence. Sometimes it is more convenient to remove one or both, applying the term vaginal hysterectomy to cases in which fibroids, the uterus, and the uterine appendages are all removed.

The progress made in perfecting the operation has taken some disputed points out of the field. Experience has given something of definiteness to our views; still there are two camps. The disputed points involve methods, rather than questions of the justifiability or safety of the operation—on these points there is unanimity of sentiment among experienced surgeons. There may be yet some division of opinion as to what cases should be operated on, and what cases should be let alone. The operation was long regarded as one of the most fatal in surgery. The low rate to which the mortality following the operation has been reduced, where the cases fall into experienced and skillful hands, has given it an abiding and important place among the life-saving procedures. In the matter of methods, men are likely to credit those methods with being best, which by their own tests and in their own individual and professional experience, have given the best results. One or more failures with any one particular method of procedure drives some men to try others. With their first success they christen the baby "My method," "My modification, "My improvement," or "My invention," and the entire profession is exceedingly glad that a new genius has been born into the profession —that there is a new light in Israel.

The history of the treatment of the pedicle in ovariotomy has influenced all of the older ovariotomists to try the same methods and materials to perfect an intra-peritoneal method in hysterectomy. The early efforts of Schroeder were quite successful. Some of the younger operators have improved the statistics by clean extirpation, but we yet remain in two camps as to the management of the pedicle.

Operators clinging to the *mud* and the extra-peritoneal method are making the best showing—operating right along with a very low mortality. It cannot be inferred, from the success of the intra-peritoneal method in ovariotomy, that improved or equally successful results will be attainable by the intra-peritoneal method in supra-vaginal hysterectomy. The results in many large and ripe experiences establish the fallacy of this idea; such inference is in blind disregard of essentially different conditions. Ligatures cannot be safely used in uterine, fibroid, or myomatous tissue. Silk, as applied to the pedicle in cystomas, is harmless and safe.

I would say here that the earlier errors in diagnosis, mistaking cystiform degeneration, fibroids, or œdematous myomas, for ovarian cystoma, were common, and the cases were either abandoned or incomplete operations done with disastrous results. Some of the most skillful operators did not escape making these errors.

The treatment of the pedicle has been repeatedly and exhaustively discussed. Results have dampened the enthusiasm of the advocates of the intra-peritoneal method.

It is necessary in the removal of about all fibroids to make a pedicle. Its manufacture in extra-peritoneal hysterectomy is the one important feature of the operation. It should be made small. Suturing securely against hæmorrhage is also the important feature in the intra-peritoneal, and the avoidance of hæmorrhage and the ureters is the important feature in the extirpation method.

Shock is minimized in the extra-peritoneal method, the operation being shorter, exposure and manipulation less, than in any of the intra-peritoneal methods.

The method of turning the pedicle into the vagina is a tedious operation; the risks of hæmorrhage and of injury to the ureters are even greater than that of a clean extirpation of the cervix.

The question is often asked, "Why leave the cervix or stump in at all; it is the most common source of hæmorrhage and sepsis in all the intra-peritoneal methods?" Its removal is the perfected operation, but the results as yet have not been as good as in the extra-peritoneal method of treating the stump.

Hæmorrhage is incident to the supravaginal, as it is to all the methods. The bleeding varies greatly, and sometimes is absent altogether. In this procedure the elastic ligature (Kleeberg's) and the wire ligature minimize the risks of hæmorrhage. The chief danger in the intra-peritoneal method is bleeding from the pedicle. Drainage, or the dry treatment, where adhesions have been extensive, is of vital importance in these operations. It is an important object to get and keep the stump dry. In some cases you need not change the dressings for a week or more. They should be changed when they become moist. The advantage should be kept in mind of sewing the edges of the peritoneum across the stump, thus preventing retraction when the loop has become somewhat loose from the shrinkage of tissue. The duration of the operation is one of the many factors to be considered. There should be that rapidity consistent with due caution and scrupulous attention to essentials. There is no time for fussiness. There is the shock of the anæsthetic. Extensive adhesions, bowel and bladder complications, require painstaking surgery, and tedious and slow steps of procedure, and somewhat lengthy, however deft and educated the hands engaged. Temperature is an important consideration. Supplying dry heat throughout the operation will avoid, to a very great extent, the shock due to the chill of the atmosphere. In the matter of shock, long exposure and long anæsthesia count for much. It should be kept in mind, however, that to deal with an abdominal wound carelessly or too hurriedly, is bad surgery. Every step should be timed to the needs of the case, every motion that of a master workman, and there should be summoned into service every resource of our science and art.

When we come to consider hysterectomy in all its phases, the condition of the patients when they come into our hand—the dire extremity that drives them to us, that they come to us with general health broken down, often complete physical wrecks, and familiar as we are with resultant issues,—we have no difficulty in appreciating the difficulties we have to encounter. The professional responsibility is a heavy one. The patient's condition suggests the urgent question: "What should be done?"

We appreciate the truth of J. Knowsley Thornton's statements, we accept them in the main as surgical truths, into the acceptance and practice of which the profession should be educated. As to the relative value of two very different surgical procedures for the cure of fibroid enlargements of the uterus, he says:

"I feel that I am confronting one of the most difficult questions in abdominal surgery, armed with imperfect weapons. Medicine has long and vainly endeavored to deal satisfactorily with this disease, and now the surgeon's aid is invoked. I do not deny that many cases have been relieved by medical treatment, and that some have been cured while under such treatment. I do think, however, that it is an open question how many of the cases cured while under treatment were cured by the treatment, and I believe the majority of such cures have been due to the coincident interposition of Dame Nature.

"A very large number of patients never suffer pain, or even inconvenience enough to make them consult either physician or surgeon. But admitting all this, there undoubtedly remain a large number of cases urgently demanding surgical aid. Some patients are brought face to face with death from hæmorrhage, excessive growth of the morbid elements, or constant interference with rest from pain and discomfort. Others are gradually but surely reduced in strength, and have lesions of vital organs as the result of constant pressure and displacement. When surgical treatment is spoken of, we are told that we have no right to interfere with fibroids as we do with ovarian tumors, because the latter surely kill if left alone and the former do not. I am certain that this argument is only partly true, and everyone who sees a large number of cases will bear me out in the statement that numbers of women die every year from the direct and indirect effects of fibroid enlargement of the uterus.

"I would ask: How much of the general surgery of the day which is dangerous to life would continue if surgeons ceased to perform operations of expediency, that is, to operate for deformities and diseases which do not endanger life in themselves, though they deprive their victims of all the pleasures of life? I affirm, then, that there are many cases of fibroid enlargement of the uterus which endanger the lives of their bearers, and that there are many more which make

these poor suffering women so miserable and useless that they are justified in running the risks of operation, and that the surgeon is justified in operating. We must remember that these operations are usually undertaken in extreme cases, and when the patients are worn out with disease and suffering.

"The operation of complete supra-vaginal hysterectomy, with removal of both ovaries, has become, when properly performed, one of the most successful of the great operations.

"Hegar and Kaltenbach, by their new extra-peritoneal method, have saved eleven cases out of twelve, and the surgeons at the Samaritan Hospital have in the last year had equally successful results, also by the extra-peritoneal method, using Koeberle's wire *serre-nœud* in much the same way that Hegar uses the elastic ligature. These operations of hysterectomy and complete supra-vaginal hysterectomy still remain, however, very formidable operations. They are terrible mutilations; the patients are slow in convalescence. Is there, then, no operation of less danger, of quicker convalescence, and of better and more perfect results, which we as surgeons can recommend to our patients?

"Thanks to American surgery, the brilliant conception of Blundell, in 1823, was made a recognized surgical procedure by Battey in 1874, and from the labors of Hegar, Trenholm, Tait, Savage, and others I am able to present a perfected operation, which will render this formidable hysterectomy still less often necessary in the future than it has been in the past.

"The complete removal of the uterine appendages, when efficiently performed, cures fibroids of the uterus with rapidity and certainty. And I will ask my readers to remember that this operation is not such a serious mutilation, and does not leave behind it any mark except a small linear scar on the perfectly closed abdominal parietes. The removal of the uterine appendages is attended with infinitely less danger to life than are the various operations for the removal of uterine fibroids.

"Are we, then, justified in subjecting our patients to the formidable operation of supra-vaginal hysterectomy when we can cure them by removal of the uterine appendages?"

It should be accepted as a settled fact that we are never justified in doing a hysterectomy when the appendages can be removed early in the growth of the tumor.

Philadelphia, Pa.

PRACTICAL POST-MORTEM NOTES.*

BY HENRY W. CATTELL, A.M., M.D.

Get all the anatomical knowledge possible out of every autopsy; it is therefore advisable, especially in females, to perform a preliminary laparotomy. Many surgical operations can be practiced upon the body without disfigurement, such as Alexander's operation, oöphorectomy, removal of the ear ossicles and the vermiform appendix, stretching of the sciatic nerve, symphysiotomy, etc.

Dictate the post-mortem notes while the autopsy is in progress.

Respect the feelings of the friends in every possible manner, and in a private house always return everything to its proper place; be sure to leave no blood marks behind.

Be sure of a legal right to make the post-mortem before beginning. The nearest relative, or the one who pays the expenses of the funeral, should give the consent, *in writing!*

Do not take away more tissue than can be thoroughly worked up.

Encourage a demand among the laity for the performance of autopsies.

In making an autopsy have a regular method, to be modified only by exceptional circumstances. Finish the examination of each organ in as thorough a manner as possible before the examination of another is undertaken.

Label all specimens at once with name of subject, character of the specimen, relations in the body, date, and preservative fluid employed.

If unfortunate enough to inflict a dissecting-wound, wash the same with running water for four or five minutes, then dress antiseptically—do not out of bravado go on with the post-mortem if there be anyone else present who can complete it.

If not making the autopsy personally, do not be too forward in suggestions; but always remain ready to do anything in connection therewith that may be asked.

Never refuse to make an autopsy for another when you can possibly spare time to do it.

Tact will secure many autopsies; curiosity

* Read before the Philadelphia County Medical Society.

of relatives and friends can often be worked upon to secure permission.

As the object of an autopsy is, usually, to discover the cause of death, either for legal or scientific purposes, it should therefore be conducted in as thorough and accurate a manner as possible.

In legal cases be sure to protect yourself in every possible way. The jars (which should never have been used) containing the specimens, should be sealed in the presence of witnesses. In important cases in Philadelphia, the Coronor has both of his physicians present at the autopsy, so that the testimony is stronger; and in case of absence of one of the physicians the other can go on the witness stand and the case not be postponed.

If you value peace of mind, do not put yourself forward as an expert witness in medico-legal matters. Knowledge which you already have should be freely given to the court in criminal cases, but the court cannot compel you to obtain expert knowledge without your consent.

In Germany the legal evidence of a post-mortem held by gaslight has been judged by the court, except under certain peculiar circumstances, to be void.

If two persons are lifting the body, the lightest weight is at the feet.

Chloroform, when placed on a towel and the head enveloped in the towel, will quickly dispose of pediculi capitis.

Many signs of inflammation, especially of the mucous membrane, disappear after death. Remember that red flannel often colors the skin red.

Make of the undertaker a friend.

It is a good knife that will keep its edge in more than one post-mortem.

Do not jump at conclusions too quickly; tentative diagnoses alone should be made until the post-mortem is complete.

Always weigh the important organs, and have some method by which you can tell the right from the left in case of double organs; one nick in the left-sided organs and two in the right will readily distinguish them.

Wash hands frequently during autopsy, so as not to allow the blood to dry on the skin.

In opening a cystic kidney be careful the contents do not injure the eyes or soil the linen, as when opened the liquid is under pressure and may squirt several feet.

A duct can often be easily followed by making a nick in it, and then introducing a piece of broom-straw or a groove-director in the direction desired to dissect; this is especially useful in the ureters and the ductus choledochus communis.

In writing the account, describe what you see; do not use names of diseased conditions —these should be put in under the head of pathological diagnoses.

Urine or aromatic spirits of ammonia will best take off odor from the hands; this odor is usually gotten from opening the intestines.

Ammonia spirit, or aromatic spirit, will remove iodine stains; a weak solution of hypobromite solution will remove carbo-fuchsin and other anilin stains.

Any organ desired to be saved should be placed in a safe place so that it will not be returned to the body and sewed up.

The dissecting-room is a poor place to study pathology, on account of the chloride of zinc forming with albumen an insoluble albuminate.

Nervous tissue for microscopic study should not be placed in zinc chloride or in alcohol.

Remember a post-mortem, with the exception of the brain and cord, can be made with a penknife.

Also that the thoracic and abdominal organs can be removed by the rectum or vagina.

Before removing the calvarium, have a basin so placed that it will receive the blood and cerebro-spinal fluid.

Drawings, photographs, casts, cultures of micro-organisms, and microscopic slides are valuable additions to a well written account of an autopsy.

A lesion in one part of the body will often suggest a careful search for another in some other part.

Do not mistake the normal for the abnormal.

Squeezing the gall-bladder after the duodenum has been laid open, will often cause bile to pass out, and the papilla, the ending of the common bile-duct, can thus be demonstrated.

Remember frozen sections of fresh tissue can be cut and mounted in a half-hour to an hour.

Three hours is none too long in which to make a complete autopsy.

Be careful that the first rib does not scratch your hands when removing the tissues in that region; therefore cover over the cut ends of the clavicle and ribs with the skin flaps.

Blood makes a good glue for affixing labels, and the blood of a person dying from hydrocyanic poisoning makes a most excellent red ink which will keep for years without the addition of any preservative fluid.

Remember that after the brain has been sequestered the fundus of the eye can be removed by a circular incision posteriorly, without disfigurement. The inside should then be stuffed with dark-colored wool or cloth.

In private cases you will be frequently judged of your skill as a pathologist by the neatness with which you sew up the body.

If you discover suspicious lesions, always stop the post-mortem and report the case at once to the Coroner.

Remember in warm weather the intestines are especially liable to undergo rapid decomposition when exposed to the air.

Remember a railway train or cart may pass over the body and leave no abrasion on the skin more than a brush burn.

Remember the color of organs is frequently changed when exposed to the air by the oxydation of the hæmoglobin. Also that the sulphide of iron frequently discolors organs after death, due to the sulphuretted hydrogen during decomposition precipitating the *Fe* of the hæmoglobin.

The clavicle can be grasped and moved, and the claviculo-sternal articulation thus readily discovered.

In removing the cord the following method may be used without disfigurement to the skin of the back part of the neck: Make a circular incision from the middle of the trapezius muscle of the one side, to the middle of the same muscle of the other side, using as the centre of the circle the external occipital protuberance—this will take in the median line to about the second dorsal vertebra; then dissect away the skin with the muscles attached, and elevate this flap with a tenaculum, and draw the shoulders backward. A sufficient amount of space will be given to then remove the cord in the usual manner.

If the rectus muscle on each side be cut near its origin, in the direction of Poupart's ligament, the abdominal cavity will be much more thoroughly exposed to view than in the ordinary manner. First, however, examine with the finger for hernia.

Lastly, be honest. Everyone diagnoses lesions during life which are not found during post-mortem. After a most careful autopsy it is often impossible to tell the cause of the patient's death.

Correspondence.

THE DETROIT UNIVERSITY PROJECT.

To the Editor of the MEDICAL AGE:

DEAR SIR:—In your issue of Oct. 10th I notice some suggestions made with reference to the Detroit College of Medicine, broaching the idea of merging it into a true university. This is not exactly a new thought to the officers, nor to the Alumni of the College, though no definite steps have yet been taken to accomplish what seems to me so desirable an object. Will you pardon me if I call the attention of the AGE and other friends of general education to some facts in this connection, and a suggestion of what might, with comparatively little effort, be done to make Detroit a widely known literary centre?

About four years ago, largely through the liberality of Mr. Geo. S. Davis, the Department of Pharmacy was added to the College. Seeing the advantages likely to result from an increased number of students, and at the solicitation of some members of the Alumni, this was followed shortly by the opening of two other departments—Veterinary Surgery and Dental Surgery. It will require no argument to convince anyone that the departments have been of great value to the College, bringing both larger attendance and increased facilities for higher education. This is further shown by the fact it is receiving many students from the ranks of those who had entered at the State University, and the Canadian colleges where clinical and other facilities are meager.

There are still two classes of students unprovided for, and who would gladly avail themselves of the advantages for study afforded

by a great city: namely, those seeking a literary education, either *per se* or as a preparation for professional work; and those who desire to pursue strictly scientific studies farther than the limit reached by either the curriculum of the University of Michigan or the Detroit College of Medicine. For these there would be required a Department of Letters, with a course leading to the degree of A. B., and a department for the pursuit of such branches of science as might be deemed most essential, but especially those useful and necessary to the modern medical specialist, such as biology, embryology, histology, bacteriology, etc. Many young men apply for admission to the Medical College whose preliminary education is defective, and who must either be turned away (only to go to some other medical school whose requirements are less strict, and to graduate as incompetents or quacks) or else be received into a literary course adapted to prepare them for the professional curriculum later on. This is equally true of those in the Department of Law. The advantages to a medical practitioner of a thorough scientific education are too obvious to require pointing out.

Now what remains to be done to put the College on a university basis? It has already four departments of medicine in successful operation, with excellent appointments in all. A School of Law is established, with every prospect of permanent success. The consideration of Departments of Art and Music could be postponed till those of more practical importance were in full operation. For the Literary Department proper quarters could be rented near the College for a time, though such proximity is not essential. At Columbia College, New York, the Medical Department was at the College of Physicians and Surgeons on Twenty-third street, while the Law School was on Lafayette place, and the Literary Department far uptown. Yet nearness would be of advantage.

As to the Scientific Department, the College has been offered for this purpose a large lot, of an acre or more, for building a school, with a considerable quantity of building material thrown in. It has the assurance that the State Fish Commission would gladly supply it with abundant material from the fauna of the lakes, for the study of biology, diseases, foods, parasites and habits of fish, etc.; also the promise of specimens of monkeys and various other animals from other sources. The use and custody of the Detroit Scientific Museum, which has fortunately been accepted by the College, was a part of the same general offer to the Board of Trustees. In addition to this, a gentleman who owns a collection of curious and scientific material, worth fully as much as the above-named scientific museum, is quite willing to donate its use, and eventually its ownership, to the College when a proper place shall be prepared for its reception and care.

Possibly also the movement undertaken by certain Detroit gentlemen a year or more ago for the establishment of a Manual Training and Scientific School, and which proceeded as far as the subscription of $100,000, might be revived and united with the above as a branch of a general university.

From this it would appear to be a very easy matter for the Detroit College of Medicine to step to the front with a little vigor, and put itself at the head of a great institution of which both city and State might be proud, and which the former would find to its financial interest at least to support.

ALUMNUS.

Detroit, Oct. 20th, 1893.

To the Editor of the MEDICAL AGE:

DEAR SIR,—It is reported the physicians of Detroit are increasing their fees materially since the financial crisis. Is this true?

Also is there a legal scale of fees prescribed by the State of Michigan, or by the State Medical Society? If not, is there any regular scale in Detroit, and where could I obtain a fee bill?

Very truly yours,

PRACTITIONER.

London, Ont., Nov. 4th, 1893.

[No scale either legal or otherwise for the State. For information regarding local fees, address Dr. C. Henri Leonard, 18 John R. street, Detroit. We have no knowledge of increased charges in this city.—ED.]

The Medical Age.

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Editorial.

IMPURITIES IN ICE.

The popular fallacy that water undergoes a species of purification in the process of freezing, scarcely requires more than an emphatic and contemptuous dismissal from any medical journal. This error has caused mischief enough, and any organized action deserves a greeting of welcome when it tends to do away with a previous source of danger to the public health. The French Council of Hygiene and Public Salubrity, among other bodies, has given this subject careful, conscientious attention, and it is interesting to note the conclusions reached and the measures projected for the regulating of the sale of ice to the public hereafter:

All merchants, manufacturers, depositaries, or retail dealers, of whatsoever character, are to be forbidden to sell or offer for sale, for *alimentary* purposes, ice not manufactured from water taken from the drinking supply of Paris; such ice must yield potable water on melting:

It shall be incumbent upon manufacturers and depositaries of ice for industrial purposes and of ice for alimentary use, to store their stock in separate places. One of these places or store-rooms shall be reserved for the stock of ice, *not pure*, exclusively intended for industrial use. The other place shall be used solely for pure ice, to be later converted into potable water. The door of each shop shall bear a distinct sign, "Alimentary Ice," or "Non-Alimentary Ice":

The vehicles employed for the transportation of the ice shall bear signs indicating distinctly the character of the contents, and in no case shall there be any conflict between the sign and the ice contained:

All retail dealers shall likewise be constrained to provide two cases or containers for their ice, fully separated and bearing the proper inscription to indicate whether the ice is for drinking purposes or for other use. Those retail dealers who cannot provide two reservoirs or cases shall be permitted to sell alimentary ice only.

Of course, if such a measure were proposed to regulate the sale of ice in this country, straightway all the vested interests—and they are more powerful than is generally imagined—would set up a howl of "paternalism," and the measure would meet with a vigorous opposition. It is, however, by all means desirable that some means be hit upon for obviating the danger and mischief wrought by the delusion that frozen filth is fit to drink when melted.

SULPHUROUS ACID AS A MEDICAMENT.

In another column will be found a note on the use of sulphurous acid in typhoid fever, accredited to Doctor Arnott, of London, Ont., who seems to imagine such application of the remedy is original with himself. A quarter of a century since, or thereabouts, Doctor Dewar of Kirkaldy, Scotland, advanced precisely the same ideas, in connection with what he was pleased to term the "sulphur cure," and deemed applicable to many diseases: this "cure" consisted mainly of varied and novel applications of sulphurous acid.

Astonishing results were claimed for the medicament in phthisis, chronic bronchitis, asthma, croup, diphtheria, tonsillitis, laryngitis, "clergyman's throat," malignant sore-throat scarlatinal and otherwise, etc. Subsequent experience, however, failed to establish Doctor Dewar's lavish encomiums, although it was evidenced that in some of these affections the remedy might be very useful.

Doctor Adam of Glasgow, who critically examined the assumptions of Dewar, declares that in catarrh, acute bronchitis and chronic cough, the acid "stimulates the exhalant vessels, and under its influence the tough viscid phlegm which collects in the bronchi is dislodged more freely than under the use of ordinary expectorants;" but he doubts its advantage over chlorine or vinegar inhalations. In some cases of asthma it was not tolerated at all, in others the effects were *nil*. "Individuals subject to repeated ca-

tarrhs, otherwise in good health, seemed really benefited."*

The remedy is highly spoken of by Doctor R. Hamilton in The Practitioner of February, 1869; but the strongest evidence of positive character comes from Doctor G. Wilks,† who claims for it a real antidotal power. He recommends from three to twenty minims at a dose, according to age, every three or four hours, and continuance of use for a week, ten days, or more, in fact "until the patient complains of tasting, smelling or feeling like sulphur or lucifer matches; or in the case of infants until they actually emit an odor of the gas from the skin and breath"—this being taken as evidence that the system is saturated with the remedy. When diarrhœa was present he added aromatic sulphuric acid and laudanum.

The great success which appears to have attended the use of this remedy by Doctor Wilks, and so recently by Doctor Arnott, certainly will justify further trials. It may also in this connection be recalled that it is in the same class of cases enumerated by Doctor Dewar that Doctor Cummins ‡ thinks so highly of sulphurous acid fumes, generated by burning sulphur, as a prophylactic.

Among other affections which yield, according to Doctor Dewar, to sulphurous acid, either in solution or by fumigation, are chilblains, sore-nipples, chapped hands, bruises, ulcers, and wounds whether surgical or accidental; in the latter he regards it the superior of carbolic acid, besides being less of an irritant and devoid of disgusting or objectionable odor.§

In skin diseases of vegetable-parasitic origin, sulphurous acid diluted one-half to three-fourths is often an efficient remedy if applied on a piece of lint and then covered with oiled silk or rubber cloth to prevent evaporation. This treatment, first introduced by Sir William Jenner, seems to have fallen into desuetude—unaccountably, considering the successful results obtained,—and will well reward revival.

Doctor Dewar recommended the employment of sulphurous acid in three ways, where complete constitutional effect is desired: By fumigation—for this purpose a few drops of the acid to be dropped in boiling water and the fumes inhaled, or a small portion of sulphur to be sprinkled from time to time on hot cinders so as to fill the apartment not inconveniently with the fumes: In spray by means of a vaporizer: In solution—equal parts of the acid (B. P.) and of water or glycerin.

* Glasgow Medical Journal, March, 1868.
† British Medical Journal, Dec. 3d, 1870.
‡ Dublin Quarterly Journal, August, 1889.
§ Medical Times, September, 1867.

CHLORATE OF SODA IN CANCER.

Judging from the well known specific action of chlorate of potash in solution on epitheliomas of the membranes of the upper digestive passages, and especially upon cancroid of the outer angle of the eye, M. Brissaud (Annuaire de Thérapeutique) experimented with chlorate of soda in cancer of the stomach—he gave preference to the sodium salt because it is less toxic, possessed of greater solubility, and also eliminated with greater facility; as regards toxicity he remarks: "One gramme of soda chlorate is necessary for the extermination of one kilogramme of animal."

Selecting only typical cases, those in which it was impossible an error in diagnosis could occur, a solution of chlorate of soda (eight to sixteen grammes in 100 grammes of water) was caused to be ingested in teaspoonful doses in the course of twenty-four hours. "Under the influence of the medicament," he declares, "the melæna and hæmatemeses vanished, the cachexia disappeared, and the tumor itself was effaced in the course of a few weeks."

M. Brissaud, however, does not claim this salt as specific in all cases of cancer. He lays more particular stress on the action of the medicament in connection with epitheliomas that are uncomplicated by thrombosis or phlebitis, and which give no evidence of extension by involvement of the general glandular system. Nevertheless, he admits, in spite of the favorable action of the remedy, that in some cases, though followed by temporary amelioration, the ingestion of the medicament resulted in failure. He remarks:

"The medicament is administered thus: At the beginning eight to ten grammes daily are ingested, and if the vomiting and hæma-

temesis do not cease, increase the dose until such result is obtained. Sixteen grammes is the maximum dose, because if it be exceeded bulbar accidents are to be feared. Albuminuria, however mild, contra-indicates the medicament.

"In the foregoing I submit merely my preliminary observations and only seek to establish the possibility of the medical treatment of cancer: I will later publish a summary of cases. Other medicaments might be tested, even the potash salt, although chlorate of soda seems to be preferable."

These claims are somewhat astonishing, and appear "almost too good to be true," yet are substantiated by a mass of evidence that does not permit of their being ignored. The fact will be recalled, moreover, that much the same has been claimed for Fluid Extract of Poke Root. Under the circumstances, it manifestly is the duty of the profession to inquire thoroughly into the merits of both these drugs in reference to malignant growths; they might be investigated separately, and also in combination. It must be remembered, however, that many of the so-called preparations of Phytolacca do not represent the true properties of the drug.

CALOMEL AS AN ANTIPYRETIC.

In a paper read before the late Pan-American Medical Congress, Doctors R. J. Nunn and A. D. Simmons advocated calomel as an antipyretic especially advantageous in typhoid and continued fever. They drew the following deductions:

"Calomel is a sure and safe antipyretic, reducing the temperature from two to three degrees in a few hours:

"Small doses are of no avail:

"The ingestion of large doses is followed by no untoward event, no ptyalism, no hypercatharsis:

"Diarrhœa, hæmorrhage, albuminuria, and tympanites are not contra-indications to its use:

"Even where there is no cathartic action induced it insures reduction in temperature:

"Calomel acts best in combination with soda, bismuth, and pepsin:

"In some instances the remedy cuts short an attack; in others, while it may have no influence on the temperature *per se*, it modifies the system, and by keeping febrile activity in check aids materially in the management of the case."

This coincides largely with our own experience, save that we fail to see any special advantage in combining calomel with soda, bismuth, and pepsin; indeed, to a certain degree bismuth is contra-indicated in connection with calomel, and it certainly will inhibit the action of pepsin. Calomel is best administered with monobromate of camphor, the dose of the latter being regulated by that of the former. Even forty grains of mercurous chloride is no contra-indication from point of size of dose. The results are much more satisfactory than when smaller amounts are ingested; there is absolutely no danger of salivation unless administration is followed by large quantities of acid; there is no nausea induced, and, as Doctors Nunn and Simmons remark, no hyper-catharsis. On the contrary, the action is thorough and prompt, free from all discomfort. Again, the ingestion of a single large dose accomplishes much more than can be obtained by a series of small doses distributed over several days.

ARBOR VITÆ AS AN ABORTIFACIENT.

"Is thuja an abortifacient?" is answered by Prof. A. Tschirch, of Bern, in a late number of the Zeitschrift des Allgem. Oesterr. Apotheker-Vereines. We give in the following his summary of conclusions obtained from a most careful examination of previous literature:

Thuja occidentalis is scarcely to be considered among the abortifacients, in the narrow sense of the term, since it has nowhere been determined by specific experiments that any one of its constituents exerts a specific action on the pregnant uterus; but it has been established that it *can* produce *secondary abortion*, exactly as does savin. Inasmuch, however, as all inflammatory processes of the lower abdominal organs may produce abortion, cholera, for example, is also to be classed amongst the abortifacients if we extend the scope of the appellation, for numerous cases of premature birth were observed in Hamburg as a sequel of the Asiatic scourge:

The active constituent of the thuja leaves which produces this result is the ethereal oil and, especially, the thujol contained therein:

Thujol is a poison and even in relatively

small doses causes profound intoxication or death:

Thuja leaves are more dangerous than savin leaves. If abortion is to result at all, the dose administered must be made so great that death is liable to ensue as a result of inflammation of the abdominal organs induced:

With respect to both thuja and savin, cases are known in which a moderate dose failed to produce abortion, while larger doses produced abortion and death; and with savin there are cases on record (Taylor) in which death supervened but no abortion. Though secondary in its action, thuja is accordingly not a reliable abortifacent, nor is savin:

In view of the dangerous character of the thuja leaves, the efforts that are being made to destroy the savin tree and to remove it from parks should be equally extended to the thuja or arbor vitæ.

POST-PARTUM HÆMORRHAGE.

Recently some of the European savants have become enthusiastic over the use of strychnine in post-partum hæmorrhage, claiming for it powers far transcending those of ergot or so-called "ergotin."

Persisted in, or pushed to the verge of physiologic activity just short of toxicity, it may certainly tend to excite uterine contraction, in exactly the same way as it tends to tonic excitation of heart or other muscle; but its action in such case, far from being specific, as claimed by its advocates, is merely general, though perhaps, from surroundings and circumstances, with a local manifestation. Even then it is a much less valuable remedy than Cannabis Indica, normal liquid, in fifteen- to thirty-minim doses, which *is* specific, and moreover prompt and efficacious.

Nevertheless, as a matter of fact, strychnine possesses a merit in post-partum hæmorrhage that is little appreciated and generally overlooked; when there is manifest weakening of the central organ of the circulatory system as the result of profuse loss of blood, this remedy often proves of exceptional value in supporting the heart.

All that is now claimed for the nux-vomica alkaloid, was long since asseverated as one of the chief properties of the crude drug; the same has also accrued to ipecac in years gone by. Each have their places, but for the flooding of the lying-in room nothing can permanently usurp the places of ergot, black haw, hydrastis, and Indian hemp, employed singly or in combination as circumstances may dictate.

LEGAL CRITICISM OF MEDICAL EXPERT TESTIMONY.

A recent trial in Omaha, Neb., brought forth some deserved criticism from the legal profession, and likewise from the judicial bench, concerning expert testimony as it commonly obtains in courts of law. Doctor Clark Gapen summarizes the criticism as follows:

"The expert is an important factor in the various litigations that arise, but, as at present conducted, a trial involving a medico-legal question is a farce as compared with a cause which involves purely a question of law.

"Lawyers sometimes like to pose as learned in medicine. For this reason, if no other, the expert should be selected by the Court, and wholly with reference to his knowledge of the question involved.

"A cause of disrespect of medical expert evidence is, the common custom of permitting the expert to act as both counsel and witness in the trial. Seemingly the Court might properly take testimony as to the *qualifications of the expert.* An excellent plan, perhaps, would be to have lists handed in by each side, and let the Court choose from the lists. Again, the expert should avoid invading the province of the jury, or giving an opinion on the individual case; the proper course to pursue, instead, would be to put a hypothetical question to the expert for answer.

"Medical jurisprudence should be properly taught in medical colleges; at present this topic, to say the least, is handled in a perfunctory and slipshod manner by merely repeating over and over the mummery of some text-book long since obsolete.

"Moreover, in teaching jurisprudence the student should be given a forecast of what he is likely to encounter in court. And above all, he should be taught to be frank, truthful, direct, plain, non-technical, and likewise, when giving an opinion, to previously segregate the same from all outside considerations. Students go forth unequipped in these particulars."

These few words strike at the very foundation of the evil of medical expert testimony as permitted in the United States.

ITEMS AND NEWS.

Personals.—

At the University of Vienna, Doctor Edward Neusser succeeds to the chair so long left vacant by the death of Professor Kuhler.

Doctor Sendziac, of Warsaw, obtained at the International *Concours* of the Society of Medicine and Surgery of Toulouse, the prize of 1,000 francs, along with a gold medal, for his work on "Malignant Tumors of the Larynx and their Treatment."

The English "Father of Laparotomy," Doctor Charles Clay, who resided near Blackpool, departed life recently at the ripe age of 92 years. His first ovariotomy, performed in 1842, was a complete success; equally satisfactory was his extirpation of a uterine fibroid three years later, through an abdominal incision.

Doctor Ingersoll Olmsted, Medical Superintendent of the General Hospital, Hamilton, Ontario, has resigned. He goes to Philadelphia as Lecturer on Bacteriology in the University of Pennsylanvia.

The veteran editor of that classic medical quarterly, The Asclepiad, will henceforth have a handle to his name, and be known as Sir Benjamin Ward Richardson, Her Britannic Majesty having seen fit, in recognition of services in the field of science, to bestow upon him the order of knighthood. The honors attached thereto are well deserved, and will be worn both modestly and gracefully.

Doctor Lallier, the Parisian dermatologist, is dead; also the accomplished Doctor Israel, who for many years was chief assistant to Rudolph Virchow, and Professor Extraordinary in the University of Berlin.

Doctor John Hollister, for many years upon the editorial staff of the Journal of the American Medical Association, has assumed control of the North American Practitioner.

The veteran orthopædist, Lewis A. Sayre, was recently successfully operated upon for cataract.

Doctor J. C. Culbertson, the erudite and genial editor of the Lancet-Clinic, has accepted the chair of Practice of Medicine in the Cincinnati College of Physicians and Surgeons. Doctor S. C. Ayres takes an ophthalmological professorship.

Some changes have taken place in the University of Buffalo: Doctor W. H. Bergtold succeeds Doctor S. Y. Howell as Professor of Pathology; Doctor J. B. Andrews is now *emeritus* Professor of Insanity, while Doctor A. W. Hurd is Lecturer on the same topic.

Doctor D. W. Montgomery has been elected Professor of Dermatology in the University of California.

The Professor of Diseases of Children in the Carolina Institute, Stockholm, Sweden, Doctor Hjalmar Aug. Adelin, died on Sept. 13th at the age of 76. He was an extensive contributor to medicine in his special department, both to Swedish and foreign medical journals.

Doctors Anderson, Pepler, and Fenton have been added to the staff of the Faculty of Trinity Medical School, Toronto, respectively as Demonstrator of Pathology, Assistant in Pathology, and Assistant in Histology. Doctors Charles Temple and D. A. Rose have received appointments as Demonstrators of Anatomy in the same institution, while Doctors B. E. McKenzie and Frederick Winnett are in receipt of like appointments at the Toronto University.

Doctress Arabella Knealy, the author of "Doctor Janet of Harley Street," an English novel that has reached a fourth edition, is said to have entered the medical profession with the express intention of bringing its resources to bear upon fiction. Having shown considerable literary talent at a very early age, the time necessary to attain a medical degree was regarded by her friends as sheer waste. Miss Knealy is now more than ever convinced that it could not have possibly been better spent; that for the study of human nature and a thorough realization of some of its most suggestive phases, the life of a physician is pre-eminently fitted.

The German Professor on Hypnotism.—

Hybnodism vos a mendal disorder raging brincipally in der noosebapers. It vos a hypertrophy auf der imachination, undt der writers on mendal pheenomenons vos first attacked. You mighd call it a sort auf writer's cramp auf der prain; der ingrediences peen made auf a fool undt a rascal.—Mix thoroughly undt set avay in a cool blace.

Bud one well authendicated case has been

reported, undt dot vos told py a notorious liar auf France. As a defense for der lawyers to sed up in murder drials it vould peen a pudding, as Schiller saidt; but its brincipal use so far alreaty has been confined to sheap novels undt skyentific makazines.

Fife tousand years ago a Greek philosopher hybnodized a rooster shicken mit a straight chalk-mark on der floor, undt now, in 1892, der skyentific beeples discofer dot you can hybnotize beeples auf dey aindt got as much prains as dot rooster. Nature got hard feelings towards a vacuum, undt auf you aindt got any intelligences auf you own you can absorb dot from somepody else. It vos a choyful surbrise to some peeble's headts to get a mind inside auf dem py hybnodism auf dey didn't had some alreaty by natural.

It's bedder, young mens, dot you cultivate some prains auf your own, aber you debend on hybnodism oder hypodermic inchections auf mendality. In der meandimes I can hybnodize dis class more expeditiously undt skimultaneously mit a glub. It's bedder you enchoy dis pecooliar pheenomenon vhile she is goin', pycause she vill soon go down der stream auf time pehind der plue glass, der roller skate, Koch's lymph, Keeley's gold cure, undt pig-headed canes.—*Judge.*

A Deserved Tribute.—

Some months ago we received from an eminent American pharmaceutical house several samples of products from their laboratory which were placed at our disposal for investigation.

We have tested all these preparations most fully, and are compelled to admit that they are very superior and elegant products, possessed of all the vital therapeutic action that is claimed for them.

We give emphasis to this assertion because we are alive to the fact that physicians of most countries are inclined to view with suspicion the products emanating from other foreign countries, and especially so when from the United States. We are unfortunately aware that these prejudices are not always without just grounds, but Messrs. Parke, Davis & Co. *never* ask physicians to accept any mere verbal or written assurance concerning the products of their laboratory. What they *do* ask them is, that they will reassure themselves by practical experimentation as to the nature of their preparations, and as a fact they have always relied upon the general consensus of opinion of our profession at large as the basis of any statements they may make in describing them.—*Indian Medical Record.*

The Canadian Medical Association.—

The officers for 1894 are: President, Doctor Harrison, Selkirk, Ont.; Vice-Presidents, Doctor F. R. Eccles, London, Ont., Doctor Stewart, Montreal, Que., Doctor Christie, St. John, N. B., Doctor Muir, Truro, N. S., Doctor Spence, Brandon, Man., Doctor Newburn, Lethbridge, N. W. Territories, Doctor Taylor, Charlottetown, P. E. I., Doctor McKechnie, Nanaino, B. C.; General Secreretary, Doctor F. N. G. Starr, Toronto; Treasurer, Doctor Small, Ottawa. The Provincial Secretaries are: Ontario, Doctor I. Olmsted, Hamilton; Quebec, Doctor Anglin, Montreal; New Brunswick, Doctor McLaren, St. John; Nova Scotia, Doctor Keen, Cow Bay; Prince Edward Island, Doctor Johnston, Charlottetown; British Columbia, Doctor Walker, New Westminster; Manitoba, Doctor McDiarmid, Winnipeg; North West Territories, Doctor Calder, Medicine Hat. The next meeting will be held at St. John, N. B.

Kissing and the Somalis.—

The Somalis never indulge in kissing in public; never kiss a friend. Relatives kiss one another, but not before strangers, as the act is regarded as a token of love, instead of a formal method of salutation. The kiss is more than a token of love; by the betrothed man and woman it is regarded as a solemn seal of union, and such a thing as a breach of promise after the *dunkad* (kiss) is applied is unknown. Yet kissing is an act much enjoyed and employed among these dusky descendants of Ham: The fond mother's lullaby to her restless babe is one continuous strain of song, beautiful in rhythm, in cadence and melody: "*idunko*," "*idunko*," "kiss me," "kiss me," and soon soothes the little one to sleep. The Somali looks upon promiscuous kissing as a dirty and dangerous habit. What an advance upon the social hygiene of the Nineteenth century!—*Temple Bar.*

Do the Seriously Ill Ever Sneeze?—

Mr. Jonathan Hutchinson does not recollect to have seen any but fairly healthy persons sneeze. He mentions the widely spread popular superstition that sneezing is a sign of health and "good luck," and thinks this may have had its origin in the fact that it is for the most part an act restricted to those in fair health. Tylor, in his "Primitive Culture," gives interesting facts as to the prevalence of this creed and as to certain customs associated with it, and traces it in part to doctrines of animism, but Mr. Hutchinson thinks the suggestion he has given may also have some value.

"Le Progres Medical" and the World's Fair.—

A correspondent of this Gallic periodical asserts that "American men all chew tobacco or the ends of cigars, while seven of every ten American women are constantly working their jaws on chewing-gum. The insteps of one's boots become loaded down after a day's walk over the Exposition grounds by the accumulation of pieces of gum expectorated by the jaws of the fair female natives. As for ladies from Europe, they should wear short walking-skirts when visiting Chicago, as the streets are flooded with tobacco-juice."

Exactly!—

The Deutsch-Amerikanische Apotheker-Zeitung says it "will not give way to the suspicion that The Columbia Chemical Co. of New York have positively added nitro-glycerin to the glycerin previously in contact with the ox-brain, thus manufacturing their 'Cerebrine.' . . . . In all probability, in innocent glycerin we have a simpler method for the production of 'animal extracts.'"

Yes! And it's cheaper when the public are to be gulled.

Just So!—

A young doctor, desiring to make a good impression upon a German farmer, declared he had received a double education: He had studied homœopathy, and was also a graduate of a "regular" medical school. "Oh, dot vas nodding," said the farmer; "I had vonce a calf vot suckd two cows, and he made nodding but a common schteer, after all."

Sander, M.D.—

This individual of unsavory and bogus eucalyptol fame, who got into trouble with the Postoffice authorities some twenty months since, received his deserts at the hands of Judge Woolson, of the United States District Court, at Des Moines, Iowa, on the 25th ult.; he will "languish in chokey" for the next six months. The local press remarks: "He made a desperate fight for his liberty at the time the case was tried, and Carl Sander, his millionaire brother, came from Australia to help him, but in vain." Yet the veracious Carl declares Sander & Sons "have no connection with Sander, M.D!"

American Electro-Therapeutic Association.—

At the meeting of this organization in Chicago, Sept. 12th–14th, Doctor W. J. Herdman, of Ann Arbor, Mich., was elected President; Doctor Franklin H. Martin, of Chicago, and Doctor A. Lapthorn Smith, of Montreal, Vice-Presidents; Doctor M. Cleaves, of New York, Secretary; Doctor R. J. Nunn, of Savannah, Ga., Treasurer. The next meeting will be in New York City on the last Tuesday in September, 1894.

Ancient Catheter.—

Doctor J. W. S. Gouley exhibited to the New York State Medical Society, at its last meeting, a catheter found at Pompeii. It is of copper, covered with verdigris, of sigmoid form, and with the vesical opening near the extremity. Similar catheters will be fouud described by Celsus, and the rules which he gives for introduction are by no means obsolete to our own day.

Triplets.—

Mr. Sidney Mathews, of Crawley, Sussex, England, reports triplets, two boys and one girl, with three absolutely separate placentæ. More remarkable, perhaps, was the fact all three were vertex presentations, and the birth of each child was followed by its own placenta before the next succeeding infant presented.

The Ætiology of Phthisis Settled.—

"Doctor" Mary Walker, of trousers and chimney-pot hat fame, has finally evolved the cause of tuberculosis. Climate, bacilli, and all the rest, "are not in it;" the sole cause is *tobacco smoke!*

Post-Partum Hæmorrhage Again.—

There appears to be an unusual liveliness in therapeutics in this direction. The latest new remedy heralded is essence of cinnamon in 20- to 60-minim doses, which in the majority of instances means tincture of cassia oil.

The Library of the Surgeon-General's Office.—

This great medical enterprise at Washington, under the fostering care of Surgeon John S. Billings and Dr. Robert Fletcher, has accumulated upwards of 50,000 volumes and 70,000 pamphlets.

Won His Case.—

Doctor Reeves, of Chattanooga, who was sued for damages by the "Amick Consumption Cure" Company for denouncing the concern as fraudulent, won his case before the court.

Book Notices.

ELEMENTS OF HUMAN PHYSIOLOGY. By Ernest H. Starling, M.D., M.R.C.P. Cloth; 16mo; pp. 436. Price, $2.00. P. Blakiston, Son & Co., Philadelphia. For sale by John Macfarlane, Detroit.

During the last few years physiology has passed through a very critical period; from being little more than a mass of isolated and empirical facts it has rapidly assumed definite and coherent form. Still, working hypotheses resting on sure experimental bases are yet remote; consequently the ideas that underlie common physiology, although rapidly crystallizing in definite form, are vague, and to beginners difficult to understand. The work before us is well calculated to remove such obstacles to genuine and profitable study. Though primarily intended for the use of medical students, when its value becomes known we feel confident it will be resorted to as a text-book and by those who study physiology as a branch of biology.

Digestion, absorption, and the functions usually described in text-books are unusually clearly and lucidly explained. The style of teaching, too, is excellent; wherever possible all statements are referred to an experimental basis. The results of recent work are incorporated and placed before the reader in the plainest possible manner:—Hitherto such information has been largely inaccessible to the general student, either by reason of being hidden away in journals or expensive volumes, or owing to having origin in some foreign tongue. Certainly the author deserves great credit for the complete and exhaustive manner in which the book has been brought up to date in all its departments, and yet made concise and practical.

CLINICAL GYNÆCOLOGY. By Thomas More Madden, M.D., F.R.C.S. (Edinburgh). Cloth; 8vo; pp. 562. Price, $4.00. J. B. Lippincott Co., Philadelphia.

This volume contains the results of the writer's wide experience extending over a quarter of a century, as obtained in the Misericordia Hospital, the Rotunda Lying-in Hospital, and other public institutions in Dublin set apart for the treatment of diseases peculiar to womanhood. Manifestly the plan of the book is, as far as possible, to impart that clinical knowledge which the author's experience evidences may facilitate the recognition and treatment of the diseases embodied. One of the most notable features of the work is the impartial account given of the various plans of treatment advocated by different individuals, upon which the author frequently throws material light as the result of individual knowledge. As a whole the volume is practical, concise, and moreover interestingly readable; and we may add that since the issue of Sims's Uterine Surgery there has been no work published of this class which so fully meets the requirements of both the general practitioner and the student, and at the same time answers all the purposes of a text-book for the specialist. Too high praise cannot be given.

HERNIA: ITS PALLIATIVE AND RADICAL TREATMENT. By Thomas H. Manley, A.M., M.D. Cloth; 8vo; pp. 231. The Medical Press Co. (Limited), Philadelphia.

There has been a decided revival in the study and treatment of herniæ within the past twenty years, and this volume has been put forth believing it is "important for the rank and file, as well as the most noted teachers of the surgical art, to have a clear comprehension of the position which the question occupies at the present time." The author believes there is very widespread misconcep-

tion with regard to what a hernia is, including its precise origin and morbid anatomy; also that a large number of operations instituted for radical cure are unnecessary; even that the indiscriminate application of the truss in infants is productive of as much or more harm than too much operating in the adult. Special attention is therefore given to therapeutic resources other than purely operative. In connection with the numerous works that have already been put forth on this subject, the study of this malady from a purely therapeutic standpoint is one that can be commended to every physician and surgeon.

MOTHER AND CHILD. By Edward P. Davis, A.M., M.D., and John M. Keating, M.D., LL.D. Cloth; 12mo; pp. 472. Price, $2.50. J. B. Lippincott Co., Philadelphia. For sale by John Macfarlane, Detroit.

This is an entirely new departure when judged by the standard of previous works of professedly the same class. It is instructive, practical, and readable. Moreover, the aim has not been to supplant the physician, but to supplement his advice and render intelligible those matters that mother and nurse find difficult to understand.

There are undoubtedly times when a competent physician is not obtainable; also there are emergencies when something *has* to be done, and consultation of books becomes a necessity. Under such circumstances this work will undoubtedly prove beneficial. Again, the volume offers details of treatment which the physician oft-times has not time to outline for his patient. It is seldom we feel at liberty to unqualifiedly recommend works of this class, but this volume we can endorse without hesitation.

HANDBOOK OF OPHTHALMIC SCIENCE AND PRACTICE. By Henry Juler, F.R.C.S. New (second) Edition, revised and enlarged. Cloth; 8vo; pp. 560. Price, $5.50; in leather, $6.50. Lea Brothers & Co., Philadelphia.

The continuous approval manifested toward this work testifies to the success with which the author has produced concise descriptions and typical illustrations of all the important affections of the eye. The volume is particularly rich in matter of practical value, such as directions for diagnosing, use of instruments, testing for glasses, for color blindness, etc. The sections devoted to treatment are singularly full, at the same time concise, and couched in language that cannot fail to be understood. This edition likewise embodies such revisions and changes as were necessary to render it thoroughly representative; and moreover it has been enriched by the addition of 100 pages and 75 engravings. All told, there are 201 plates, exclusive of seventeen handsomely colored.

MINOR SURGERY AND BANDAGING. By Henry R. Wharton, M.D. Second Edition. Cloth; 12mo; pp. 529. Lea Brothers & Co., Philadelphia.

In this volume are embodied descriptions of various bandages, surgical dressings, and minor surgical procedures, which are employed in the practice of surgery at the present time; moreover, the preparation and application of antiseptic dressings receives full consideration. We also observe certain procedures outlined which do not properly come within the scope of minor surgery, such as tracheotomy, intubation of the larynx, ligation of the arteries, and amputations, but which certainly increase the value of the work for students, for whom it has been more particularly prepared. The very fact that the volume has reached a second edition is evidence of the favorable reception it has been accorded, and of its value. The illustrations are very superior, and derived from photographs instead of drawings.

ESSENTIALS OF BACTERIOLOGY. By M. V. Ball. Second Edition. Cloth; 16mo; pp. 205. Price, $1.00. W. B. Saunders, Philadelphia.

This is one of Saunders' Quiz Compends, and is calculated more particularly for the medical student. It cannot, however, supersede larger works of its class, since it is only at best—and so intended by its author to be—preparatory. The fact it has entered upon a second edition is evidence that it has met with more than ordinary favor.

ESSENTIALS OF MINOR SURGERY, BANDAGING, AND VENEREAL DISEASES. By Edward Martin, A.M., M.D. Cloth; 16mo; pp. 166. Price, $1.00. W. B. Saunders, Philadelphia.

This is Number 12 of Saunders' "Quiz Compends," and is designed to aid the student in acquiring the principles primarily essential to a thorough knowledge of the subjects treated.

Therapeutic Brevities.

The Preparation of Hasheesh.—Hasheesh, or *Majoom*, is prepared from the leaf-tops and tender parts of the plant *Cannabis Indica.* Four ounces of such parts of the plant, free from unripe fruit, flowers, and other impurities, are first thoroughly washed, then three ounces of pure butter added, along with four ounces of water; all is then put in an earthen pot over a slow fire. The water is allowed to evaporate, leaving in the pot the buttered leaves, which are then strained through a piece of muslin. The strained greenish extract is removed with great care, and is then washed with pure water twice. In another pot about sixteen ounces of sugar with thirty-two ounces of water and a little milk are boiled; by repeated boiling and mixing of the milk a syrup is prepared. In this syrup the greenish oily extract is put, and boiled over a slow fire. Now is the time to mystify the preparation. Some add dhatura seeds; others nux vomica seeds in finest powder; but the usual practice in Bengal is to add a few drops of attar of roses, a few grains of musk, or powdered cardamom seeds, and sometimes a minute quantity of opium. After half an hour the whole mass is poured into a flat basin, and when solid is cut into cakes. Sometimes the best hasheesh is sold at 16 rupees a seer, but usually the price is 4 rupees.

Hasheesh is the Arabic *hashish*, which means "green intoxicating liquor;" probably derived from the Hebrew *shesh*, which means "to be joyous."—Surgeon Asutosh Ghose, in *Indian Medical Record.*

Creasote in Phthisis.—My experience with Creasote is, if an intolerance to the drug be manifested during the earlier treatment of phthisis, the prognosis is unfavorable. I am inclined to believe that the administration of the drug may be made to serve as a basis for forming a prognosis—not a diagnosis.

The use and the value of Creasote as a therapeutic agent needs no defense; since its introduction by Sommerbrodt, its value has been recognized by the profession at large. I am inclined to believe that the cause for disappointment frequently lies with the physician, and that the drug is administered at too late a stage to manifest its most beneficial effects. I do not think, however, that a positive and satisfactory explanation of the action of Creasote has been given up to the present date, although the one offered by Helbing seems the most reasonable. It cannot be doubted that some cases of tuberculosis, if taken in the earlier stages, may be cured by Creasote; but I do not agree in the general opinion that the later stages can be ameliorated or benefited. Up to the present time I have not given it hypodermatically in any case, fearing the abscess that is apt to follow; but I have given it internally in all stages of tubercular phthisis.—Doctor Chas. H. Merz, in *American Therapist.*

Belladonna and Calomel in Diphtheria.—Doctor Covington does not think bacilli are the sole cause of disease. He has seen several malignant cases of diphtheria that could be very clearly traced to impressions of cold as an ætiological factor. [We can corroborate this from personal experience.—Ed.] He thinks also that all inflammatory conditions of the throat are identical, differing only in intensity; that where the inflammation extends very deep into the mucous tissue the characteristic membrane is formed, and this latter is merely a severe necrosis of the mucous membrane. He discards chlorate of potash as being an irritant to kidneys that are already in a hyperæmic condition, but finds great benefit from the use of Belladonna in the first few days of the disease [here is where the value of the Normal Liquid Belladonna is made manifest because of its unvarying character and uniformity.—Ed.], and also from a good dose of Calomel, as it seems to deplete the parts and prevents, in a measure, the rapid formation of membrane. He has used with varying degrees of success pepsin and lime-water as solvents of membrane.—*North Carolina Medical Journal.*

Abuse of Atropine.—Now that cocaine and homatropine are available, it is no longer necessary to impair a man's vision for nearly a week when we can obtain the same results with drugs the effects of which disappear overnight. The use of atropine in acute inflammation of the eyeball is altogether too frequent. The specialist sees too frequently cases of absolute glaucoma, that could have been saved by the timely use of eserine. To these cases atropine *is poison!* In corneal troubles, atropine should be instilled only when there is danger of the inflammation affecting the iris. In keratitis and interstitial keratitis, and even in ulceration, atropine is often harmful. Slight injuries to the cornea do not require atropine, with its prolonged and disabling effects. Even in iritis atropine should be used very moderately, especially when it has no effect on the pupil. When uncertain whether or not to instill atropine, it is best to give the patient the benefit of the doubt.—*Southern California Practitioner.*

Normal Liquid Ergot in Uterine Hæmorrhage.—In May, 1882, I was called to a case of menorrhagia; the uterus enlarged, and spongy notwithstanding vigorous curetting followed by styptics. In spite of oxytocic remedies, among them fluid extract of ergot, the hæmorrhage continued, and finally intense nausea supervened. Employing Normal Liquid Ergot, in fifteen-drop doses, I was gratified to discover it was well borne by the stomach and that it speedily induced uterine contractions. The patient was under treatment (gynæcological) for five successive days without recurrence of bleeding. In a case of alarming post-partum hæmorrhage, Normal Liquid Ergot employed hypodermatically restrained the flooding almost immediately, without which the patient would certainly have died; she was almost exsanguined prior to the use of the drug. Another advantage of this medicament is, that during long use hypodermatically I have never known it to produce a sore or even irritation at the point of the needle puncture.—Doctor B. F. Records.

Calomel and Gout.—Fourteen years since I began the use of Calomel in acute and subacute articular gout and the immediate sequelæ, with most satisfactory results. In more than twenty cases where employed, it acted as a specific. In a number of other cases it afforded immediate relief from suffering, its action being succeeded by slower recovery. I ascribed its value to its power to incite active peristalsis, since in robust subjects an attack of gout is usually preceded by sluggishness of the bowels, and it is in such cases the best results are obtained. It must be given so that active peristalsis will result from the very first dose. One thorough emptying of the bowels is generally sufficient to inaugurate improvement, and likewise to continue it. Prolonged treatment is rarely indicated. After the Calomel a carminative may be prescribed if desired.

I have also employed the yellow oxide of mercury in gout, which appears to act even more energetically than the sub-muriate.—Dr. Grimm, in *Deutsche Med. Wochenschrift.*

Esencia de Calisaya in Dipsomania.—What is to be done to stay the fearful curse, drunkenness, that has already fastened itself upon the Nation, and is growing greater as time passes, is a question that is interesting many of the best minds of the present day. Moral influence has been thoroughly tried and has done good when the taste for alcohol has not been acquired; but when the habit is formed, suasion and example are of little avail. To relieve the insatiable craving of the inebriate and restore him to a condition of health, medical treatment must be resorted to, and no remedy more fully meets the requirements in such cases than Esencia de Calisaya, which under no circumstances can possibly injure the patient. As an evidence of its growing popularity it is being used in every section of the country, and is doing good work.—*Exchange.*

Gelsemium and Gelsemine in Rheumatism and Neuralgia.—Doctor A. Atkinson says: There is no question but that Gelsemium will afford relief in many cases of neuralgia, but it must be pushed far enough to secure its physiological effects (just short of injury) if it is expected to obtain full relief.

In facial neuralgia it has been found that twenty minims of the tincture, or three minims of the Normal Liquid, administered every half-hour for three doses, almost invariably relieves.

Gelsemine is safe to administer when the alkaloid can be readily procured, is of known purity, and has not been kept too long. When employed in tablet form, Doctor Atkinson suggests as a good plan to stick a hole in it and let the patient swallow in half-softened state.

Berberine Sulphate in Leukæmia.—Vehsemeyer reports a case of leukæmia in a child, aged nine months, to whom he first administered tincture of barberry, a few drops daily, and as this seemed to act favorably he later substituted the Berberine Sulphate, three parts in 3500 of alcohol, five drops four to six times daily. In addition, the swollen glands were treated with an ointment containing cerate 29 parts, ammonium chloride five parts, camphor one part. Under this treatment the glands diminished in size, the grave symptoms completely disappeared, and the general condition showed marked improvement, when, unfortunately, death resulted from convulsions incident to teething.—*Therapeutische Monatshefte.*

Saw Palmetto in Enlarged Prostate.—Hypertrophy of the prostate is very common in men who have passed the age of two-score and fifteen, and is one of the most annoying and troublesome of the maladies peculiar to advanced age; it appears to be an idiopathic condition purely. It may be greatly palliated, however, and even practically relieved, by the use of Fluid Extract *Serenoa serrulata* in ½-drachm doses every three or four hours. The drug gives tone to the entire genito-urinary tract.

Salicylic Acid for Coryza.—Doctor A. J. Wegg, of Spanish Town, Jamaica, deems Salicylic Acid, when employed as an errhine, a reliable agent for the arrest of coryza. A few drachms of the dry acid are placed in an ordinary paper pill-box, in the cover of which small pin-holes are made. Before using, the content of the box is shaken, and then the nostrils applied to the openings. This may be repeated time and again until sneezing is induced, as demanded, or as indicated by the amount of hyperæmia of the nasal mucous membrane.

Syrup of Iron Chloride in Diphtheria.—Doctor Morton (Edinburgh) speaks enthusiastically of the treatment of diphtheria by Chloride of Iron. He applies the muriate tincture, diluted with water, varying in strength from equal parts to one-to-five, by means of a swab or brush two or three times a day. At the same time he administered every hour, in full doses, Syrup of Iron Chloride (Weld). "The results were astonishingly excellent."

Rhus Toxicodendron and Rheumatism.—Clinical experience abundantly establishes the value of Rhus Toxicodendron in the treatment of chronic rheumatism, particularly those cases which, for want of a better name, are sometimes termed rheumatic neuralgia, and where there seems to be a blending of two pathological entities. In post orbital pain of excruciating, boring character, its effects are magical.—Doctor R. B. McCall, in *American Therapist.*

Prevention of Malarial Disease by Quinine.—Sézary, after an experience of more than four years in the malarial districts of Algeria, confirms the observations of Longuet that complete immunity from malarial disease may be secured by the regular use of small doses of Quinine Muriate, and that these doses can be taken persistently without inconvenience to the stomach. He administers from 1½ to three grains in a single dose daily. —*La Semaine Médicale.*

Scopolamine as a Mydriatic.—Bellarminow regards Scopolamine as indicated for the same cases as atropine, and especially to determine anomalies, because it has all the good effects of the latter without any of its bad qualities. The salt usually employed is the hydrobromate in solution of half a grain to the drachm.

Arsenite of Copper for Vomiting.—Now-a-days I seldom prescribe anything but Arsenite of Copper for vomiting, it matters not what the case may be, whether one of pregnancy or not, or in child or adult. Nothing can replace it in my confidence. Nausea and vomiting cease as by magic.—Doctor McCall, in *American Therapist.*

Hæmorrhoids.—Rossolo, who is warmly seconded by MacDonald, recommends Chrysarobin one grain, embodied in a suppository with 30 grains cacao butter, ¼ grain iodoform, and $\frac{1}{10}$ grain assayed Extract Belladonna Frequently obstinate cases are completely relieved in the course of a fortnight by this treatment.

Treatment of Dandruff.—Doctor Solenco advises the following:

℞ Quinine muriate, 1 drachm.
Eucalyptus-thymol antiseptic, 3 ounces.
Aromatic spirit of ammonia, ½ ounce.
Bay rum, sufficient to make 8 ounces.

This to be applied twice daily.

For Migraine.—The following is recommended:

℞ Croton chloral, 15 grains.
Normal liquid cannabis Indica, 15 minims.
Normal liquid gelsemium, 3 minims.
Glycerin, 4 drachms.
Water, sufficient to make 3 ounces.

The dose is a full ounce, repeated in a half-hour.

For Chronic Sub-involution.—

℞ Normal Liquid Ergot, 64 grammes.
Iodide of sodium, 8 grammes.
Liquor Sedans, 192 grammes.

A dessertspoonful of this mixture should be taken three or four times a day.

Golden Seal in Vomiting of Pregnancy.—Fedorow insists that fluid extract *Hydrastis Canadensis* in 20-minim doses, administered four times daily, is an excellent and most effective remedy for control of the obstinate vomiting of pregnancy.—*Therapeutische Monatshefte.*

Spasmodic Stricture of Urethra.—The following prescription is deemed most effective in relieving this distressing malady:

℞ Normal Liquid Gelsemium, grammes 4.00.
Alcohol, grammes 3.00.
Simple elixir, grammes 25.00.

Three drops of this mixture every three hours.

Medical Progress.

THE MICROBE AND THE GERM.—

"Oh, you wicked little sinner,"
Said the microbe to the germ,
As they both slipped round together
Through the water-pipe's sharp turn.

"You're a nasty little nuisance,
And you gripe the human kid."
Says the germ: "You're another,
And you *do* just what I *did*."

Quoth the microbe as it wiggled,
Breeding quickly sons and daughters,
"You're a dirty, base-born creature,
Bred in nasty, low well-waters;

"While I come from valleys lofty,
Draining from the mountain's crest—
My surroundings all were lordly,
My associates the best.

"I came with dancing diamonds
In a bounding mountain-stream,
And over gold-flecked boulders
Laid in mosses emerald green,

"Breathing health and bringing gladness,
Filling up the iron pipes
With no calcareous deposits
Giving little children gripes;

"Whilst thou, thou low-lived creature,
Thou wert born in stagnant wells
Fed with rotting, fæcal matter
And a thousand noxious smells."

The germ is flushed in anger,
Bred a million of its kind,
The while its organs opened
To let it speak its mind:

"I know your grassy valley
And your reservoir so grand;
So let me tell you frankly,
Your purity be d——d!

"I've seen the browsing cattle
All a-chewing of their cud
And rolling round and wading in
'Midst turtles, frogs, and mud.

"And then your emerald mosses!
Now, old fraud, what are they?
But corrupt organic matter
Where your dirty offspring play?

"Oh, you nasty little beggar,
You didn't tell about the flume
Where the merry tramp grape-pickers
Lave and leave their rank perfume.

"And the sun whose rays fall hotly,
And aid the broth to cook—
You say no more about it,
But I know you like a book."

The microbe tried to blush, and failed;
Then he smiled in manner bland;
Says he: "Be friends, my brother,"
And he wiggled out his hand.

The germ it smiled its sweetest,
Saying, "We two are a type."
And so, hand in hand together,
They meandered down the pipe.

P. S.

Now both these pests are with us,
Slimy twins of grinning death.
Disinfect your kitchen hydrants;
Boil your water; hold your breath.

—*National Popular Review.*

EXOPHTHALMIC GOITRE.—Professor Müller, in Deutsches Archiv für Klinische Med., gives a description of five cases, four acute and one chronic—three of the former and the latter of which he was able to study post-mortem. In two the brain, spinal cord, and sympathetic ganglia were carefully examined. Three, studied under the microscope, proved the sympathetic intact; the vagus showed in one place a marked degeneration. In all cases changes, such as scattered hæmorrhages, were found in the medulla and the rhomboid fossa of the fourth ventricle; these were particularly numerous in the region of the nucleus of the vagus nerve. The author, however, places but little stress upon these changes. He formulates some new symptoms; such as: Abnormal sense of heat; profuse sweats; some slight and passing temperature changes; tremor of the hands; rapid emaciation with great weakness; abnormal pigmentation appearing upon the skin; change of voice; vomiting and diarrhœa—these last, occasional symptoms; constant restlessness and excitement. The author concludes that the cause of the disease is not found in the nervous system alone, but that the brain is undoubtedly also a centre; that the ætiology can be sought as a result of fright or deep distress. In one case the symptoms followed immediately after severe fright and ended in most acute form. In another the attack was preceded by deep distress and care, the patient having been made homeless owing to giving birth to illegitimate offspring.

One can scarcely understand that the psychical influences should have such a direct action upon the thyroid gland, and the only explanation is that the production of this disease is governed by two factors: First, the anomalous function of the thyroid gland: Second, a hereditary neuropathic tendency, or that produced by shock or distress. It is quite probable that neither of these two factors alone can produce the disease—only when they are combined can this occur.

TESTES IN THE FEMALE.—Kochenburger (Zeitschr. für Geburtsh. und Gynäkologie) publishes a unique case. The patient had been married ten years, was large in frame,

quite feminine in form, with breasts and mons veneris well developed. Coitus was difficult, and she was devoid of desire. Had never menstruated until the twenty-fifth year, and even then only experienced a slight flow *for one day;* no vicarious menstruation. The vagina was merely a blind sac two inches deep, while the uterus was apparently represented by an elastic body the size of a broad bean lying rather to the right; an ovary-like body occupied each labium majus, that were intensely tender to touch. These were subsequently excised, and when examined under the microscope revealed tubuli seminiferi and not Graäfian follicles — they were distinctly testicles. There were vessels arranged like the spermatic, and distinct cremasters, but no vasa deferentia. Kochenburger refers to similar cases recorded by Hicco, Breisky, and others. He classfies the monstrosity a *Hermaphroditismus transversus virilis.*

"Crocodile Tears."—The figure "crocodile tears" rests, it appears, upon a real fact, although the tears appertain more particularly to the snake. According to the explanation of the matter offered by Mr. R. H. Burne, of the Royal College of Surgeons, the eye of the snake is protected from dust, etc., by the eyelids, which are transparent and joined to each other so as to form a layer of skin between the eye and the outer lid; in other words, the snake always goes about with its eyelids shut. Thus the real occupation of the tears is gone, there being no dust on the surface of the eye to be washed off. Instead, however, of the tear-gland being reduced in size, it is exceptionally large; in some snakes, indeed, in which the eyes are reduced and practically functionless, the gland is some two or three times larger than the whole eye. This peculiar state of affairs was explained by the discovery that the gland had lost its connection with the eye, and opened through the mediation of the tear-canal directly into the mouth, thus doubtless, by means of its secretion, making the descent of Avernus smooth and easy to any unfortunate creature that this snake may have taken a fancy to. This is possibly not quite what was meant by the fable of the crocodile's tears, but it affords a curious example of how very near a false popular superstition may unwittingly come to the truth.—*Popular Science Monthly.*

Eye Disease and Menstruation.—In a woman, aged 37, who has suffered from inflammation of the cornea and sclerotic for eight years, during the last of which she has been under my own observation, the eye is, during an inter-menstrual period, with the exception of staining of the sclerotic and opacities of the cornea, almost well, whilst at the recurrence of the menstrual epoch there is a relapse. Two or three days before menstruation begins the eye becomes acutely inflamed and very painful, and remains in this condition for the first few days after the discharge has appeared. Treatment, either local or constitutional, up till now has had very little effect in modifying the course and duration of these inflammatory attacks, which pass off spontaneously, only, however, to reappear as acutely as ever at the next monthly period.—Doctor Maitland Ramsey, in *The Lancet* (London).

Hernia in Infants.—Doctor John Langton, F.R.C.S., says operations for the cure of herniæ in children are occasionally not only advisable, but necessary. In the very large majority of cases, however, patients are cured long before the question of operation can possibly arise; but there are certain conditions under which, if the child is not cured before the age of four or five years, it is advisable that an operation be undertaken, thus:

In cases of irreducible omentum, which is often adherent to the testis: Cases of irreducible omentum with fluid: In congenital hydrocele: Where hernia is strangulated: Where it is impossible to retain a hernia by mechanical appliance: Where the incompetence or ignorance of the mother prevents proper instrumental treatment.—*The Indian Medical Record.*

Ætiology of Pemphigus.—Doctor Strelitz, assistant at the Polyclinic of Dr. A. Baginsky, Berlin, reports cultivating micrococci from the contents of the pustules or "blebs" of pemphigus neonatorum; that the characteristics of the micrococci were such as to identify them with *Staphylococcus pyogenes aureus* and *albus*—results identical with those obtained by Almquist, who was able to experimentally reproduce pemphigus through inoculation upon his own arm. Strelitz chose one case occurring in a small endemic of five, repeated his cultivation experiments, and perfected them by inoculations on himself and on a student; the pustules continued to yield the yellow and at times also the white coccus, and with the former an eruption occurred corresponding to the pemphigus of the child.

Publishers' Department.

The attention of our readers is called to the attractive and distinctive Antikamnia advertisement in this number. The firm would appreciate your addressing them for samples, literature, and quotations.

Mellin's Food dissolved in hot water and cow's milk according to directions, fulfills all the requirements of Liebig's formula, and is stated to be the best substitute for mother's milk yet prepared.

Dr. M. H. Henry, New York, says: "When completely tired out by prolonged wakefulness and overwork, Horsford's Acid Phosphate is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Pure Gluten Biscuit. The undersigned have for several years been manufacturing a pure gluten for a few physicians. We are now prepared to furnish to the medical profession the only pure gluten manufactured in America. For samples and price-list address Sanitarium Food Co., Battle Creek, Mich.

Dr. W. A. Jones, of Malvern, Ark., under date of Oct 3, 1893, writes: "I have given Papine a thorough test and like it much better than any other preparation that I have ever used of all the opiates. It never nauseates, either primarily or secondarily, and has given relief where all the other preparations of opium have failed. It acts well as a febrifuge."

W. R. Warner & Co., of Philadelphia, have obtained the highest prize for the purity and perfection of their medicinal and officinal standard pharmaceutical and chemical products. This extensive firm have obtained hitherto twelve grand World's Fair prizes, and they must feel deservedly proud of the Columbian award, which is the highest of its class.—*Chicago Inquirer.*

Listol is offered as a substitute for iodoform, with the advantage that it is free from disagreeable odor. It is a non-toxic, non-irritating combination of thymol-iodide, of marked antiseptic properties, useful as a dressing for wounds, ulcerations, and all erosions of the skin or mucous membrane. Samples and literature mailed free, if requested, by Chas. M. Pusey & Co., 761 Seventy-first Place, Chicago, U. S. A.

In 1888 Messrs. Parke, Davis & Co. issued a work entitled "Organic Materia Medica." A second edition was printed in 1890 which, however, was soon exhausted. They have just issued another work which covers all the information contained in the original edition, with much new and interesting matter added. This NEW MATERIA MEDICA contains notes in alphabetical order of all articles of the Materia Medica of which they manufacture a preparation. Furthermore, much valuable information in the way of Tables of Weights and Measures, Formulæ for making Official preparations, Tables of Thermometric Equivalents, Incompatabilities, Latin Words and Phrases, Tables of Diseases and their Remedies, the Treatment of Children, Axioms of Posology, etc., etc. A copy will be mailed to any physician or druggist upon receipt of 10 cents to cover actual cost of posting. Upon receipt of 25 cents a copy bound in cloth will be forwarded. Applications with reference to this work should be addressed to Messrs. Parke, Davis & Co., Box 468, Detroit, Mich.

Attention is called to a new medicine-case just placed on the market by the Western Leather Mfg. Co., of Chicago, as shown on advertising page 2 of the present issue. There are several new departures in it from the old way of making cases that are worthy of more than a passing notice. The Comstock patent springs that have heretofore been cut from narrow strips of spring metal are now cut from a piece of the same material, but the full width of the case inside, and form removable, cleanable allmetal bottle-holders, with flanges at the head of the corks to keep them in. These bottle-holders are silver-plated to prevent corrosion. Any physician will readily appreciate the cleanable feature of these holders, as well as the device for keeping the corks. With leather loops a flange at the head of the corks is not permissible, because the bottle needs to be drawn forward in taking out, and with cases that are lined with leather or cloth the smearing of the lining with remedies has been unavoidable, and the filthy condition of the cases thus made, after a certain period of use, has been fearful to contemplate. The metal springs are ten times as durable as leather loops, and the Capitain corners with which this new case is fitted also add greatly to the durability of the case. The solid foot and corner are made of one piece. The socket allows the case to open perfectly flat, and takes all strain from the hinges. The solid feet do not wear through, and being a part of the corner do not come off. For other special features see advertisement. The price is extremely low, and can only be offered by making them in very large quantities, and by the improved method of making the bottle-holders.

The Medical Age.

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Original Articles.

THE WRITINGS OF LOUYSE BOURGEOIS.

BY HUNTER ROBB, M.D.

The first edition of Louyse Bourgeois's works on Obstetrics appeared in 1608. A second edition in 1617 contains an additional volume with a long list of clinical cases, and the account of "How she became a Midwife," being followed by "A True Description of the Births and Baptisms of the Children of France," and "Advice to My Daughter." Under the date of 1626 there is another edition augmented by a third book. In 1634 the sixth edition appeared with an appendix, "A Collection of the Secrets of Louyse Bourgeois," of which last we may say, "Good had it been for that book had it never been published." The dates in the edition which I have been studying are 1652 and 1653.

LOUYSE BOURGEOIS.

The life of Louyse Bourgeois has been so well given by Prof. Wm. Goodell, and he affords such an excellent and entertaining account, not only of the woman but of the royal midwife, that there seems but little left to do. I therefore refrain from going over ground which he has covered, and content myself with going a little more into detail in the discussion of her first and greatest book. It is only necessary by way of preface to say that Louyse Bourgeois was born in 1563 just outside the walls of Paris. She married Monsieur Boursier, a surgeon who was an assistant of the celebrated Ambrose Paré, many of whose precepts are no doubt embodied in this work. She was midwife to Marie de Medici, wife of Henry IV. of France, and the first midwife to write a book upon the subject of obstetrics. She lived to a ripe old age, but the date and place of her death are unknown.

The title-page of this work is adorned with an allegorical picture showing the Assumption of the Virgin and Child at the upper portion of the page, with the Pope kneeling on one side and a figure of John the Baptist on the other. Lower down on either side is a figure—one with a child in her arms and bearing a cornucopia with the legend "*Timor Dei*;" the other, bearing the legend "*Gratia Dei*," has a palm in one hand and a basket in the other. Beneath the right-hand figure there is a child lying on a sheaf. Between these two figures is a scroll on which the name of the book appears; just above the scroll is the lily of France, just below the name of the bookseller. At the bottom of the whole picture the inscription, "*Natura humana fragilitas humana*."

The queen, to whom she dedicates the book, was Marie de Medici, wife of Henry IV. of France. The work is divided into several parts. The first book is entitled: "*Divers Observations on Sterility, Loss of the Ovum after Fecundation, Fecundity and Childbirth, Diseases of Women and of Newborn Infants—amply treated of and practiced with success by L. Bourgeois, called Boursier, midwife to the Queen. A work useful and necessary for everybody.*" The language throughout is very quaint old French and is at first more or less confusing. One is again and again reminded how closely the French is connected with the Latin; for example, the modern word for bed, *lit*, no doubt is derived from the Latin *lectus*, "a couch." In this book it is spelled *lict*, the *c* being retained, and similar instances occur throughout the work. In the edition I possess, the Observations are divided into three parts, and, although there is no date on the title-page of the first book, we have on the first pages of the other two the date of 1652. To these three books is added a work entitled "A Collection of the Secrets of Louyse Bourgeois," published in 1653. In the first book of the "*Secrets*" she gives the treatment for internal diseases—headache, hydrophobia, catarrh, for which she declares that she has a sovereign remedy but that it is very difficult to make, although this probably will not account for the fact that it is not used at the present time. Then comes a long chapter on the treatment of the eyes. For the treatment of deafness, and the teeth, she has quite a materia medica. Diseases of the chest, coughs, pleurisy, etc., are considered. Then fevers are taken up. In speaking of the plague, she declares a piece of the root of *enula campana*, the size of a pea, held in the mouth, is a certain prophylactic, and if one has the malady already it will cure it. She also considers affections of the liver and kidneys, dropsy, gravel, and stone in the bladder; next, diseases of the intestines, such as diarrhœa, or "flux of the belly" as she calls it; for the last she advocates cheese made from the milk of a cow, goat, or sheep, milked on the day of St. John the Baptist, namely, on June 24th. For hæmorrhoids a great many prescriptions are offered, mostly salves; she has also remedies for neuralgia. In the next section, poultices of hot apples are recommended for inflammation or for curing tumors. For cancer she recommends egg-shells prepared in a peculiar manner and given to the patient to eat. Likewise is given an ointment for swellings, old ulcers, and "things that have been pronounced incurable by other people;" also all sorts of remedies for dog-bites. In the third section she returns to the maladies of women.

In speaking of the remedies for the diseases of womanhood before marriage and during pregnancy, during and after labor, she recommends that the breasts should be kept firm so that they never may hang down, by rubbing on them the egg of the partridge; Pliny is quoted in support of this treatment. Then she speaks of what she terms embellishments, and offers prescriptions for taking away smallpox marks, for making the face beautiful and white, for doing away with warts, moles and freckles, and which also are for beautifying the hands. She ends up with a list of remedies which are good for almost anything. She has a very fine pill described as "good for many kinds of pains and poisons, and the frequent use of which preserves from syncope and trembling and renders the chest sound and well."

Likewise she has what she calls an *Eau Celeste*, possessing "all the virtues and properties which are hereafter noted"—the description of virtues and properties occupies about two pages, the recipe itself about one and a half, hence I spare my readers.

To return to her first book of the "Observations." After the usual references to adverse critics of which the writers of those times were so fond, she writes a preface to the Queen and to the reader, pointing out her great aim is to enable the latter to "regain the precious flower of health." Then there are a few verses to various persons, one to each of the several court physicians.

She starts out by describing sterility and its causes. While recognizing the fact it is possible for the man to be at fault in some cases, she holds that the condition is usually due to some disease of the woman. The most frequent cause is the fact the female sex is "extremely humid but nevertheless choleric. Now the uterus is the receptacle to receive the life of the blood and to expel it from the body. Those women that abound

more in choleric than in good blood are likely to produce moles or bad germs, because nature, wise as she is, cannot make a good garment out of bad stuff. Such women ought to be bled and purged, and should not allow themselves to give way to fits of anger. In these cases an external examination will be of no use, for the malady is an internal one, and when recognized by the skilled physician can easily be cured. Now there are others, again, who are sterile from too great humidity of the uterus. The humidity coming from the brain and passing down the spine and back, moistens and cools the uterus until there is so little of the maternal heat left that the substance out of which the fœtus is to be nourished cannot be preserved." Remedies are recommended that will act by "drying these up; the physician should direct his efforts to the stomach, as to a bad cook who neglects his duty and will not cook the food which can be made to serve for a nourishment of the whole body." "These remedies will cure the patient to the content of the physician and that of the patient as well."

Regarding *leucorrhœa* and *retention of the menses*, the latter she thinks is likely to lead to cancer, and she recommends internal rather than external remedies. In this connection it is remarked there are some women who have a cold humor which blocks up the entrance of the womb and sometimes causes displacements.

Another cause of sterility is held to be a long and hardened cervix, which, instead of presenting the appearance of the mouth of a purse, looks like a flageolet, and prevents the menstrual flow from getting out, the retention causing vapors in the brain and "marvelous suffocations of the uterus," in some women causing convulsions, and movements of the uterus as if there was something rolling about inside the body, and the women then think that they are pregnant and avoid anything that will tend to disperse the humor. A skilled midwife recognizing this elongation of the cervix would know that it could not possibly be the cervix of a pregnant uterus, but that the enlargement is due to retention of the menstrual flow. She quotes the case a woman between forty-eight and fifty years of age who never had any children, but had milk in the breasts, with great enlargement of the uterus, attacks of vomiting, and desire for strange foods, and thought she felt the uterus move. Again, Louyse distinguishes between movements of the fœtus and these false movements—"A child will make a little movement just like the beating of the wings of a little bird." The movements of the non-pregnant uterus are compared to those of a cat sitting in front of the fire and arching its back. Women feel sick at the monthly periods because the vapors of the uterus are sent up to the brain and fall back again on the uterus, just as when a pot is boiling the lid is lifted up and allowed to fall again; this condition is relieved by clysters. She quotes the case of a woman whose abdomen was enlarged as if in the ninth month of pregnancy, who had such suffocations of the uterus that she had a convulsion every hour. She was purged, bathed, and bled, till at last the doctors gave her up for lost. She remained two days without any medicines at all, and the attacks got worse. At this time Louyse was called in and persuaded her to take a fumigation which attracted the uterus downwards. The patient then had labor pains, which brought forth a thing that resembled clotted blood half-decomposed, and stinking so that no one could stay in the room, and she soon became better. With great modesty Louyse attributes the cure not only to the fumigation but to the treatment received from the doctors beforehand. She then talks about cases of amenorrhœa with vicarious hæmorrhage from the nose.

Another cause of sterility is attributed to the habit of drinking too strong wine and eating highly seasoned foods, which act by heating the blood too much and consuming the fluid. "Such women are subject to ulcers of the veins and uterus."—She evidently has seen post-mortem examinations, because she says she has seen opened several bodies of patients who had died sterile and from over-indulgence. All such women are recommended to apply at once to physicians or good midwives. Her account of *chlorosis* is excellent; it is supposed to be very often due to being crossed in love, and she cured a young man of chlorosis who was in love with a girl and had one or two relapses until he gave up his hopeless suit; still in many in-

stances, more especially in girls, she confesses that the patients were too young to know anything about love. She anticipated modern treatment by prescribing iron and purgatives.

Among the causes of abortion, one of the principal enumerated is anger paroxysm, and such women are warned to consider the evil that they bring about, in that they prevent the perfection of the work of God, having received a human soul from God to glorify it eternally, which they have not guarded, and thus have done violence to the holy sacrament of baptism. There are some, she regrets to say, who, although this catastrophe has been brought about by their own fault, will argue that the child not having lived had no soul; for such sinners she has a fearful denunciation. "Although human laws condemn to death those who destroy the beings which are not created but for the use of man and have only a vegetative soul, what punishment is meet for her who willfully prevents the birth of an infant who has a vegetative, sensitive and reasonable soul? Again, what might not the child become in the world?" Evidently the authoress is very much impressed with having assisted at the entrance of royalty into the world, and is deeply imbued with the extreme benefit which such personages confer upon mankind. "What is commonly called willful abortion is punished by the laws of man; and those who cause abortion from want of forethought or carelessness, though they escape punishment in this world, can they hope to avoid the just laws of God?" Nor do those who lend themselves to the production of abortion escape her condemnation.

Pregnancy, as pointed out, is generally accompanied by some pathological symptoms, such as debility and perverted appetite, and patients are warned to control themselves lest they should produce abortion, or lest their children should be born with marks upon them. Too great eagerness as to whether pregnancy exists or not is apparently reprehensible. "Miscarriages have been caused by unskillful and overanxious midwives, who have thrust their finger into the uterus and caused hæmorrhages which resulted fatally to the fœtus." During the first and second months a competent midwife can diagnose pregnancy on finding the os open; after this time a certain diagnosis is impossible, "because, the mouth of the uterus being closed, the enlargement she feels may be due to retention of menses, and she must depend on other signs."

"If the mother is full-blooded, and if the infant is not able to use all the menstrual flow for its nutrition, and the remainder is too great to be absorbed by the breasts, it must find some outlet from the body." This is an explanation of the fact that some women appear to menstruate during pregnancy, and for such she recommends bleeding at certain intervals. For those who are feeble and emotional, wine and meat are recommended, but they should try to control their emotions, for such emotions make the woman swell, so that the uterus being pressed upon opens and casts the infant out. Miscarriages from falls, etc., is attributed to undue relaxation of ligaments of the uterus; such misfortune may also be caused by raising the arms too high up—therefore ladies of quality are cautioned to beware how they exert themselves in doing up their hair, and her more humble clients must remember hanging out linen is very often prejudicial to their condition. She points out the difference in this matter between women bred in the country and those who are town-bred. For pregnant women who have fallen or who have otherwise injured themselves and are threatened with miscarriages she recommends rest in bed and a recipe which she declares has been successful in more than two hundred cases of her own.

Hydrocephalus she attributes to the same cause that brings about premature birth, namely, that the infant has found insufficient nourishment for its proper growth. A premature infant is compared to a good general of a besieged city, who, finding his provisions exhausted, accepts the situation and capitulates. She recognizes in certain cases the necessity of bringing on premature labor, and deplores the fact that certain midwives never call in a physician until the case is practically lost—"such women are those who prefer filthy lucre to true honor, and keep their establishments full of women who have no husbands." She thinks it only right to say that physicians attending midwifery patients

should cease to attend cases of smallpox and other contagious diseases.

In making the diagnosis of pregnancy the midwife is recommended to ascertain the date of the last menstruation, as well as the color and quantity of the flow: "Some women have amenorrhœa from fright and emotion, and we should inform these that there is no sign of pregnancy. Other women, we should remember, may suffer from amenorrhœa without being pregnant. We should inquire whether their appetites are changed or are capricious, and if they have desires for strange foods, whether, as is the custom in pregnant women in the first two and a half months, their bellies seem very flat so that they think their clothes are going to fall off of them, or whether they suffer from hypersensitiveness of the skin." She adds a list of other symptoms: Palpitation of the heart: Morning vomiting: General irritability: Enlargement and firmness of the breasts: Change in the color of the nipple, which becomes red in blondes and darker in color in brunettes: Enlargement of one side: A feeling of heaviness after eating. Lastly is recommended a digital examination in order to find out whether the mouth of the womb is shut "like the mouth of a bag through which you cannot push a grain of wheat." "Above all, never try to push the finger into the uterus, and be sure that the cervix is not hard, because, as we said in the beginning, this occurs in sterile women."

Moles, she says, absorb the blood like a sponge. Women in such cases grow large all of a sudden, and are more swollen at the end of a month than a pregnant woman at the end of three months.

In case of an accident to a pregnant woman which would otherwise prove fatal, premature labor should be brought on, no matter at what period, in order to preserve her life.

After speaking of the behavior of the midwife in case of premature labor, in the next chapter she dwells upon births at term where the infants do not present well, and of the various presentations, of which she mentions twelve:

1. The worst one of all is the presentation of the navel, when the belly comes first, the legs and arms being behind and the cord prolapsed. She suggests turning if possible, and declares such presentations are generally fatal unless the infant is small and the body (*i.e.*,) the pelvis of the woman large. If possible, the cord should be replaced. The accident is dangerous "because the cord gets cold and the circulation is interfered with and the respiration of the child stops; for while in the body of the woman he breathes through the cord because he is swimming in water, and he cannot like a fish breathe through his nose without getting his mouth full of water." She suggests putting the woman across the bed with the head low and the hips elevated, so as to assist the presenting part to go back, and then, having greased the hand with fresh butter, to try and bring the legs down, pulling gently on the child during a pain.

2. For a transverse position, which she considers about as bad, she suggests also bringing down the feet.

3. In shoulder presentation she recommends turning, and that the patient, after being allowed to rest, should be placed in a convenient chair when she has pains, so that the weight of the head may bring it down.

4. When the arm presents, she says this must be replaced instantly, the best way being to have a bowl of cold water ready and to allow the infant's hand to rest in it, whereupon it will pull it back very soon; if, however, it is too feeble to do this, grease the arm before it has time to swell, replace it gently, and then turn by the feet.

5. If two hands present she recommends that these should be replaced in the same way, and the midwife must then decide whether it is better to bring down the feet or try to make the head present.

6. If one foot presents, and if the pains are strong, the midwife should bring down the other foot as well. If the pains are feeble the patient should rest, and a clyster should be given to produce a stool and at the same time to bring on the pains.

7. If the breech presents, it is very dangerous to allow the infant to come out doubled up; the midwife should bring down the feet.

8. Prolapse of the cord in front of the head she holds to be due to too much amniotic fluid. "On no account should the woman be allowed to stand up or sit in a chair. She should lie down with her head low, the cord should be replaced, and a pad of cotton should be thrust in where the cord is trying to come out, just like a cork into a cask."

9. Presentation of the hand before the head.

10. A face presentation can be mistaken for a breech presentation, and she recom-

mends the hastening of labor by stimulants or, if necessary, by an injection.

11. When the head presents more on one side than on the other, she says the condition is very annoying, because it may be mistaken for a normal presentation. The patient should be put on her side so that the weight of the head will bring it into the middle; if this is not successful, some manipulation will be necessary.

12. Even in the really normal presentation, when the head comes down in the middle line, she holds the aid of the midwife is necessary. Sometimes the cord is entangled about the neck and must be disengaged; if this cannot be done, the cord must be cut and disentangled and both ends ligated. The ligation of one end is necessary in order to prevent the infant from losing blood; to the other end a string must be tied, which is fastened to the thigh of the woman for fear of losing it. The midwife must be prepared for another accident, as sometimes after the head is born the shoulders are large, and it may become necessary to pass the finger under the armpit and make traction.

In Chapter VIII, premature rupture of the membranes is described: "I have seen cases in which the membranes ruptured twelve, eight, six, or four days before labor. If labor does not come on two or three hours after rupture, then it will not come on for at least twenty-four hours. The rupture is due to weakness of the membranes rather than to an excess of the waters." She deprecates the rupture of the bag of waters purposely, because it may produce prolapse of the cord or prolapse of the hand or foot; she prefers to try to give strength to the mother that she may rupture by her own efforts. "Premature rupture is very dangerous to the child, but in cases where the rupture has taken place twelve hours before labor there remains sufficient amniotic fluid to moisten the natural passages. These can also be lubricated by means of fresh butter." She warns women, however, in whom rupture of the membranes has taken place, not to go out of doors for fear air may enter the womb; she has seen cases in which the air did enter the womb and compressed the vessels, and the woman had convulsions. She begs them "to remain in bed and await the hour of God."

In speaking of false labor pains she considers they are due, sometimes to colic, sometimes to other intestinal disorders. "Colicky pains, if they begin above, never pass below the navel, and if they begin below, never pass above it. For these pains try hot linen, and if they are colicky pains they will pass off; if a real labor pain, this treatment will increase it." Here a vaginal examination is required.

As to the position of the woman during labor: "A woman who wishes to keep about and can do so until she is just ready to give birth to the child, may be allowed to stand with her legs apart, supported during the pains by two strong people, or she can have a low stool with a pillow on it, in front of a table, and can kneel on the pillow and put her arms on the table." Our author, however, prefers to keep the patient in bed unless the labor is too long, and does not think it advisable to let the woman leave her bed at any rate after the head has engaged in the os,—with the limitation, that if it comforts the woman (and the woman needs comfort at this time), she allows her to do as she pleases, especially as she has often seen patients made worse by being forced by too solicitous mothers to keep to the couch.

The bed itself ought to be high at the head and coming to a point at the foot. A large faggot placed in such a way that it will touch the feet when the legs are not fully extended should be used to hold the feet. There are some women who, on the best of beds, think they are going to be suffocated; these she has delivered sitting or standing up. She has known cases of the child being delivered with the mother in this position, in the absence of the midwife, when, the woman not expecting, it fell to the floor and was killed.

Although it has been denied by some that twins are ever of the same sex, this idea is contrary to her experience. "In the case of twins the labor is longer. Sometimes the first child comes well and the other badly. It is certain that the first born is the stronger because it has broken through the membranes first. In one case a second child was left to Nature and was born twelve hours afterwards, and, though it lived, it was at first very weak." In such a case she thinks that Nature ought to be aided, the labor pains excited, and the bag of waters ruptured. If the second child presents badly, the mem-

branes should be ruptured, and turning by the feet performed. The cord of the first child should be cut and ligated before the second one is born.

With reference to medicines which are to be given to a woman in labor, she is not in favor of employing violent remedies unless in cases of extreme necessity, "as this procedure is apt to cause marvelous fevers after child-birth." The two extremes must be avoided, "repletion and inanition." Nourishing broths, the yolk of an egg, and ammonia water to fortify the heart, are recommended – "not too much, however, for fear of causing fever." Other recipes are mentioned, but she prefers the doctor should decide what the patient should or should not take. She gives recipes which are recommended by learned physicians, as in some cases the idea of sending for a physician frightens the patient unnecessarily or makes her believe that the midwife is incompetent.

Delivery of the afterbirth: To make the diagnosis she places the infant on the edge of the bed, with the head and the abdomen covered, taking care that nothing touches the face; then with the hand on the abdomen of the woman she finds out on which side the placenta is situated. Friction being made on the side where the placenta is found, the woman is ordered to close her fist and blow into it, or put her finger into her mouth to produce nausea, or to strain as if she was going to stool. If this does not succeed, she is made to take the raw yolk of an egg. "The knowledge that the egg is raw produces nausea and excites the stomach, and often even the thought of it will have the same effect. Asafœtida and such like remedies may be useful." In two thousand labors she says that she has never had occasion to put her hand into the uterus to get the placenta except in two cases. The one case had been mismanaged by another midwife; the other one was of fever, where the uterus was so dry that the placenta could not be expelled. She gives three rules in which this procedure is justifiable: If the woman is bleeding: Where there are convulsions: When the woman has fever and the womb has become too dry. She has seen bad results in cases where doctors and midwives have been too hasty in this matter.

Chapter XVI deals with after-pains, which are said to be often due to rolling of the uterus in the belly and to displacements.

Post-partum hæmorrhages occur in some women "because they have too much blood," and in others "because they have taken too many heating remedies during labor, so that the blood is heated and hæmorrhage occurs. This is followed by great weakness, which must be met by wine in small doses, and by a moderately tight bandage which compresses the vessels. The white of an egg will restore the natural heat of the stomach which is diffused all over the body, and at the same time along the spine; over the course of the vena cava, a napkin which has been wetted with a mixture of vinegar and water should be placed." She does not allow the woman to go to sleep while the bleeding is going on, because she is more likely to die under these circumstances. When the hæmorrhage is partially controlled the astringent may be taken off and a little of the blood allowed to come away slowly, so that it will not do harm by remaining in the womb.

Chapter XVIII treats of the puerperal state. "As soon as the woman is delivered, after a hard labor she must be put in the skin of a black sheep which has been flayed alive; this is applied to the back. To the belly is applied the skin of a hare which has also been flayed alive. The animal having been flayed, its throat should be cut and the warm blood rubbed on the inside of the skin and applied to the body of the woman. This blood chases away the melancholic blood. In winter these remedies must be kept on two hours, and in summer one hour." She then describes rather a complicated abdominal bandage she was in the habit of using. "After this is taken off, hot linen should be applied to the breasts for about twelve hours before giving proper remedies for producing milk." "These galactagogues should not be put on till later, because the blood is still too excited."

For women who have little blood, nourishment is ordered. She has found those who lose but little blood are apt to persuade themselves they would be better if they lost more, so they want to be bled: but the doctor is warned not to listen to the entreaties of such patients. "Some women whose dis-

charges are white think there ought to be blood in them, whereas these white discharges are in reality blood which has gone to the breasts to be made into milk, and not having been utilized is returned to the uterus, whence it is discharged."

She expressly states that the rules of life are not the same for every woman in the puerperal state, and that one cannot give the same diet to a society lady in town and the peasant woman in the country. "The stomach of the one is stronger; if you offer it soup it acts like a mill that is grinding without anything in it. To delicately nurtured women give very light diet, soups, jellies of veal and chicken, but not of mutton for fear of fever, and the wine should be diluted. Combat insomnia by barley-water. After eight days the nourishment can be increased."

For eight days after labor she recommends a daily injection of honey-water with extract of roses, holding that milk is "dangerous and not so cleansing."

Chapter XXIII treats of antigalactagogues. "There are many such remedies. Some nurses use their favorite remedy on all their patients. This is just like applying the same saddle to many horses." "These," she adds with scorn, "are often secret remedies." She expresses the opinion that, although some people say that a midwife need not be a nurse, no woman unless she is a good nurse can be a good midwife. Then she speaks of inflamed breasts and suppuration; she has known cancer to come from unwise applications to the mammæ. She mentions an autopsy in a case of cancer in which the uterus was found full of great red tumors that had been caused by the milk which had been present since the birth of the last child, and having returned from the diseased breast to the uterus had brought with it some of the cancerous growth. She holds this could have been avoided by proper applications to the breasts. Great care is recommended where the breasts have been fissured by the infant. She warns against the danger of catching cold in the breasts. The taking of drugs by the mouth in the first days of the puerperal state she also considers dangerous.

Care of the new-born child: "It is the custom of learned doctors to give the child as soon as it is born a teaspoonful of pure wine to revive it after the agitation it has gone through in being born. Others believe that wine cuts the phlegm which is ordinarily found in the throat. Others again believe that the vapor of the wine mounts to the head and makes the brain firm. Such children are thus protected from epilepsy in after life, since epilepsy comes from debility of the brain. The umbilical vein should be ligated firmly, and if it be full of blood it ought to be emptied, for fear that this should turn into pus. It should be ligated two finger-breadths away from the belly, and cut three finger-breadths below the ligature. If the cord is large and full of water and of winds, after the end has been wrapped in linen for half an hour it should be unwrapped and ligated afresh. It should be placed with the end upward, as there is thus less danger of bleeding. The infant should be washed in warm wine and water, walnut oil being employed for the face, throat, arms, and hands. Bandaging the head is a very bad practice, common in Paris, and ought not to be employed. The tongue should be examined to see if the child is tongue-tied, but the frenum should not be ruptured with the finger, because the nail is poisonous and may produce a canker or an ulcer." She begs lady friends of the family not to interfere too much, but to leave the care of the child to the midwife; and she deprecates the practice of trying to form the face or head by pressure, "as if the child were made of wax or putty."

Chapter XXVII refers to the choice of a nurse. The following rules are laid down: See that the woman does not squint, as the infant may catch it: She must not have red hair, because the milk of such a woman is exceedingly hot: Let her have good white teeth: Let her not have a family history of phthisis: She must have a pure breath, otherwise the lungs of the infant will be irritated: She must have a good digestion: There must be no family history of leprosy, epilepsy, or any other disease. She quotes the case of a child who caught epilepsy from a nurse, a child of very good family. She holds that the moral character and disposition of the infant depends on that of the nurse, and that therefore the disposition of the nurse must be good. "She must not be irritable, and she must

have milk in abundance, but not too large mammary glands." She thinks that the nurse will not be so good if she has her menstrual flow or if she has connection with her husband.

After treating of colic and the minor ills of children, she comes to *cancrum oris* and cases of prolapse of the rectum. To remedy the last, the child, must be put with its head low and the bowel reduced, and she tells us that as the infant grows older the anus becomes smaller and the intestine bigger, so that the condition is finally cured. She orders the application of a bandage to be kept on all the time except at night.

After giving recipes for ointments for making the limbs strong, she speaks of falling of the womb, a condition which she attributes to accidents, carrying heavy burdens, working too hard, and bearing large infants. "Sometimes part of it is pulled out by unskilled midwives in their attempts to deliver the placenta." She prescribes rest in bed, but says that it is no use to treat the symptoms without finding out and removing the cause. She recommends astringents with suppositories (or pessaries). "The pessary should have a hole so that the vapors of the womb can come out. It should be taken out occasionally to be cleaned. Such women should not lace themselves tight, for after labor they will have a proportionately bad figure."

She insists a midwife should be acquainted with the anatomy of the uterus. "If she does not know this, she may try to expel the uterus instead of the placenta, as has been done in this city." Therefore she begs of the doctors to allow the midwives to attend their lectures on the subject, the midwives paying for the same.

In speaking of a case of hydrometra she tells of a woman from whom there came half a bucket of water three months before labor. At the end of six months of pregnancy she experienced great pain, extreme tension and hardness of the belly, which seemed as it it were going to burst. Louyse gave her a carminative enema with some relief; but a month later, having the same pains and while pacing the room, the woman felt a great flow of water come from her, as if she had opened a water-tap. Louyse happened to be in childbed at that time herself and could not go to her. Two months afterwards the patient was delivered. The bag of waters was intact, "which shows that the water that came from her was not from the bag of membranes, but rather from dropsy of the womb."

Chapter XXXIX is interesting as it gives signs by which the death of the fœtus may be diagnosed. It relates the case of a woman who was supposed to have labor pains at seven months, but Louyse Bourgeois diagnosticated a colic. After this there were no movements of the child. On examination the cervix was found to be slightly opened. She concluded on account of the colic that the infant had attempted to come from the womb and had died in the attempt. Two physicians and Madame Françoise, who was a midwife, were called in consultation. It was concluded that the infant was dead, for the following reasons: The woman's breath was bad: Her excrement was very strong-smelling: Her eyes were dim: Her belly was cold: When she turned on her side the belly all went to that side in one mass. Cæsarean section was suggested, but the physicians decided "to leave the affair to God and to Nature." The patient was in bed six weeks. "Two months afterwards she came to me saying a large quantity of water as cold as ice had come away from her. I found the cervix dilated, and she gave birth the same day to a fine female child. Her trouble was caused by drinking cold water, which gave her the colic and chilled the child."

Our author sometimes performed surgical operations, for she states that once she extracted a stone as long as a man's finger from the neck of the bladder. She then narrates several cases:

"A lady was delivered of two children, one dead and half rotten, and the other alive and well. The waters of one infant were all black, and the infant was dead and much disfigured and a horrible sight, and had no epidermis. She then bore a live child immediately afterwards."

"A lady was delivered of a dead child from whom she had felt no movements for several months and which was born dead. The woman had felt no movement for a month. Heat was applied to the abdomen, and something was felt to move up inside. This was

undoubtedly the uterus, which being chilled by the dead child moved towards the heat. The woman had none of the ordinary signs of the death of the child, which is explained by the fact that the waters being cold they hardened the child and there was no putrefactive process."

"A lady in her first labor bore a dead child and was badly nursed. Five or six days afterwards she became insane and, in spite of her husband, ran about the streets naked. Four years afterwards she recovered a little and bore a child without any accident. Ten years later she bore two children, one dead and one alive. On the fifth day she became insane. On the fifteenth day, as she seemed somewhat better, her guardians relaxed their watchfulness. She escaped and flung herself down a privy, a thing which in her previous attacks she had tried to do. She was caught by the seaffolding and saved. After ten months she got better and again became pregnant. I had her milk drawn, as she had never nursed her children. On the fifth day she showed signs of insanity. I attended her breasts, gave her an enema, and the next day she was better. I have no doubt that the insanity was caused by the abundance of milk. In these cases there is acute fever. The heat goes to the head, the body gets cold, and the patient has chills. The lady became again pregnant, and following my advice (that is to say, by the use of enemata) she avoided all evil results."

The next case was that of a woman who died from eating ice.

"Attempts were made to bleed her, but no blood was obtained. She died within twenty-four hours. At the autopsy all her blood was fonnd to have gone between the epiploon and the intestines, a vein having ruptured. This was brought about by overdistension caused by the ice. Except in the abdomen, not a drop of blood was found in the body."

With respect to premature births at the seventh and eighth month, she thinks that some infants are born too soon from healthy women simply because the uterus is small, and that in other cases the accident is brought about by falls. If the placenta is broken off so that the child cannot breathe, he is drowned in the waters or is suffocated for want of air.

The story of the woman who bore on her nipple a serpent for ten months, as well as the long list of infallible remedies which are scattered all through the work, proves that Louyse Bourgeois, with all her good sense, was not entirely free from credulity. But it is not only in the works of our author, or indeed those of others of the older writers, that chaff is to be found mingled with the wheat. To those who are inclined to criticise too severely, and who would dwell upon the credulity of the woman (a thing, by the way, which exists even in our times) and on her too ready belief in the infallibility of her own remedies, we would say: "Let him who is without sin cast the first stone."

Throughout we can see the sound commonsense, the patience, and, what is quite as important, the earnest desire to deal with cases not in any routine way, but to look at each by itself and seek to remove the cause rather than attend only to individual symptoms, which gave to Louyse Bourgeois her well deserved pre-eminence in her profession, and make her work not only interesting, but of much practical use to us of the present day; for without these qualities, in spite of our better opportunities, we cannot expect to obtain good results.

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TUBERCULOUS TUMORS OF THE LARYNX.*

BY DR. M. HAJEK.†

Of the manifold tuberculous forms of laryngeal disease, the so-called tuberculous tumors of the larynx possess a very particular diagnostic interest; I particularly allude to tumors which are rigidly defined, and that may proceed from almost every part of the mucous membrane of the organ —at one time broad-based, at another more pedunculated; and everywhere presenting, as their most important criterion, a complete covering of mucous membrane. Their surface is smooth or dotted, frequently covered with papillomatous excrescences. Laryngoscopic examination gives, perhaps, the impression that an ordinary fibroma or papilloma is being dealt with, since the resemblance is perfect, and it is only on examining the entire individual that the supposition is presented to the mind that back

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of an apparently benign tumor, tuberculous disease is possibly hidden. In most instances, however, the histological research, and the subsequent course of the malady, afford the first definite proof that the physician has to deal with a more subtle affection.

From the foregoing it will be sufficiently manifest why only a few years ago tuberculous tumors of the larynx were cited as curiosities of literature. Of recent years, since it has been made evident that the external symptomatic form of a laryngeal growth is no reliable guide to its true character, the more frequent occurrence of tuberculous tumors of the larynx has been established—wherever medical men have been in position to subject the polypus-like and papilloma-like tumors of the larynx to microscopical examination.

Thus far the literature of the subject comprises forty cases of tuberculous tumors of the larynx. These cases, however, are by no means of equal value, for many of the reports are lacking in the microscopical examination which guarantees the accuracy of the clinical observation; and from others — generally those of earlier date—the impression is conveyed that they were cases of hypertrophic granulations such as are wont to supervene in the vicinity of tuberculous ulcers. All authors are, however, unanimous that the latter may not and should not be confused with real tuberculous tumors, since the granulations in question are of such common occurrence as almost to be regarded as the natural attribute of tuberculous ulcers of the larynx.

The first observation possessing an almost certain guaranty comes from Ariza.* The case was one of tumor, approximately of the size of a wheat kernel, proceeding from tubercle of the epiglottis and covered with intact mucous membrane. After extirpation, microscopical examination was made and the tumor proved to be "tuberculous." To Ariza, therefore, is due beyond doubt the priority of this discovery. Taken in connection with Ariza's clear description, I cannot agree with Avellis† that Tobold had furnished as early as the year 1866 a precise description of tuberculous tumors of the larynx, since from the very citations quoted by Avellis himself it is evident, in my opinion, that Tobold had seen and described under the appellation of "tuberculous vegetations" the granulation tumors previously mentioned.

The second case was revealed by an autopsy made by J. N. Mackenzie,* and later given at greater length by Chiari in the report of the Rudolf Hospital. Here the tumor, occupying the vestibule of the larynx, consisted of fibrous, cheesy masses.

Next, two cases were cited by Andral,† in one of which a pedunculated tumor proceeded from one of the ventricles and lay over the glottis; the other, originating in the false vocal cord, presented a warty surface.

One of the most classical cases, which was carefully observed and investigated in every direction, was encountered by the late Prof. Schnitzler;‡ this was the first in which diagnosis of tuberculous tumor was made on the living subject and corroborated by microscopic examination.

The sufferer was a Russian 21 years of age, who during youth had suffered from scrofulous glandular enlargement; claimed to have been always well in other respects. A year before the examination he began to cough; hoarseness and dyspnœa soon followed. Examination showed dullness over both lung-apices, bronchial breathing and rattling. The sputum contained an abundance of tubercular bacilli. Laryngoscopic examination showed anæmia of the larynx and, besides, a considerable number of tumors varying in size from a bean to a hazel-nut and proceeding from the left ventricle of Morgagni; the color of the tumors was somewhat redder than that of the rest of the laryngeal mucous membrane, and on their surface were numerous gray nodes as large as a pinhead. In view of the great dyspnœa of the patient, tracheotomy was performed and the tumors removed endolaryngeally; transient relief followed, and persisted for seven months when, in consequence of new proliferations, tracheotomy again became necessary. This time the granulations were removed with the curette, and cure resulted. The histological exami-

* La Tisis Laryngea, Anfiteatio Anatomico Esparol. 1877–78.

† Tuberkuloese Larynxgeschwuelste. Deutsche Med. Wochenschr., 1891, Nos. 32 and 33.

* Tubercular Tumors of the Windpipe. Clinical Society of Maryland, January, 1892.

† Clinique Medic. Cited after Avellis.

‡ Wiener Medic. Presse, 1884, Nos. 44 and 46.

nation performed by Prof. Kundrat showed that the tumors were of tuberculous character, consisting of conglomerated tubercles which contained bacilli.

Schnitzler mentions also two other cases, in one of which a tumor originated in the ventricle of the larynx, in the other in the posterior wall of the windpipe. These, however, were not long enough under observation to permit of continued and careful study.

After Schnitzler's report, numerous individual observations were published by Percy Kidd,* Lermoyez,† Foa,‡ Schaeffer,§ Heryng,‖ Dehio,¶ A. Hennig,** Gougenheim and Tissier,†† Stoerk,‡‡ and Avellis.§§ The latter alone has published thirteen cases occurring in the practice of M. Schmidt, and has contributed substantially to our knowledge of this class of growths. I refrain from citing all the published cases, or gathering together the literature of the subject, since this has recently been done in detail by Avellis. I will now submit five cases observed by me personally, as in many respects they offer evidence of value is assisting to diagnose tuberculous laryngeal tumors.

Case 1.—Em. Sch., 52 years old; came to the General Polyclinic in January, 1892, on account of a hoarseness which had persisted for several months. Laryngoscopic examination disclosed a grayish-red, round polypus, seated at the posterior end of the left vocal cord; though not exactly pedunculated, it was connected with the cord by a very small base. The surface of the polypus was perfectly smooth, and projecting prevented the approach of the vocal cords. The remaining parts of the larynx were almost normal, and, aside from a slight reddening of the vocal cord in the immediate neighborhood of the polypus, neither ulceration or thickening could be observed (Fig. 1). As the patient

Fig. 1.

had been coughing for some time, the condition of his lungs was ascertained at the same time. This examination showed no dullness, but prolonged expiration. The very small quantity of sputum contained tubercular bacilli.

After examination of the lungs, it was necessary to determine with caution the character of the laryngeal polypus, with special view to the fact it might prove tuberculous; and such was actually discovered to be the case when histological examination was made.

With the exception of the spot where the polypus adhered to the cord, it was entirely covered with a manifold layer of pavement-epithelium; the layer of mucous membrane lying thereunder showed nothing abnormal aside from a very meagre stratum of lymph-cells, in dense aggregation only in three places; only in the deeper layers of the mucous membrane were interposed colonies of real tubercles to be seen. The individual tubercular foci were separated from one another by more or less dense, fibrous threads of connective tissue, so that the tubercles seemed isolated; in only two of the tubercles did cross-section show that they were imbedded in a coherent web of granulations. They contained giant cells, and, in sections colored by the Ziehl-Nelsen process, tubercular bacilli could be observed in the giant cells, though in meagre number.

Inasmuch as the tuberculous character of the laryngeal polypus was thus placed beyond question, prognosis respecting definitive cure became dubious, although after removal of the tumor the wound healed rapidly, and recovery of the voice was complete. After the lapse of a few months, in May, 1892, the patient returned, presenting an aggravated condition of lung and larynx. He coughed more; the sputum had become more abundant; the left pulmonary apex was

* Percy Kidd, Tubercular Tumors of the Larynx. 1884. British Medical Journal.

† Lermoyez, Tubercular Vegetations in Larynx. Annales des Malad. de l'Oreille et du Lar. 1884.

‡ Foa. Di una forma rara di tuberculosi della laryngе. Archivio per le Scienze Med., vii.

§ Tuberkeltumor im Larynx. 1887. Deutsche Med. Wochenschrift, No. 15.

‖ Die Heilbarkeit der Larynxphthise.

¶ Dehio, Primaere Tuberk. Neubildungen des Larynx. 1888. Petersburger Med. Wochenschrift, No. 16.

** A. Hennig, Berliner Klin. Wochenschrift. 1888, No. 28.

†† Gougenheim and Tissier, De la Phthisi. Laryng. Pseudopolypeuse. 1888. Annales d. Malad. d. Laryng., No. 7.

‡‡ Stoerk, Beitrag zur Operat. Behandl. der Larynxtuberk. 1892. Wiener Med Wochenschrift, Nos. 3 and 4.

§§ [illegible].

dull; bronchial breathing; general debility. Larynx showed the entire posterior third of the left vocal cord, including the previous seat of the polypus, noticeably thickened, the thickening extending also to the subglottic portion of the left vocal cord; motility of the arytenoid cartilage of the same side was intact, however. The thickened vocal cord was ulcerated and beset with numerous flaccid granulations. In the neighborhood of the previous polypus a diffuse tuberculous infiltration had developed and ulcerated.

After repeated endo-laryngeal removal of the granulations, and application of lactic acid in augmenting concentration up to 80 per cent., the tumor became cicatrized and so remained, to my great surprise, until July of this year, when I saw the patient for the last time.

Case 2.—Katharine H——, 54 years old; came to the Polyclinic in June, 1891, suffering from complete hoarseness and dyspnœa. She was cyanotic, emaciated, and the pronounced inspiratory dyspnœa was striking, even at a distance. Laryngoscopic examination revealed the lumen of the larynx narrowed down to a small aperture in the posterior portion of the glottis (Fig. 2). The cause

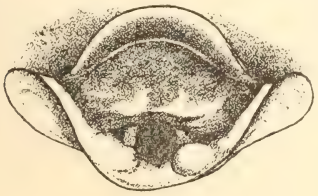


FIG. 2.

of this narrowing proved to be a large, tumor-like thickening which, proceeding from both the anterior ends of the false vocal cords, lay like a diaphragm over the glottis, and, as stated, shut off the upper laryngeal space from the lower, with the exception of a small opening. Of the vocal cords only the remotest posterior ends seemed to be free; on the latter, as well as on the remaining visible parts of the larynx, no infiltration or ulceration could be observed.

The lungs displayed double-sided infiltration of the apices; general condition bad. Diagnosis: Probable tuberculous formation of tumor in the larynx.

In view of the advanced stenosis of the larynx, and her debility, I proposed tracheotomy as a prophylactic; but the patient encouraged me to proceed at once without tracheotomy to the endo-laryngeal operation, removing with the aid of a Landgraf double curette the diaphragm-like tumor piece by piece. Three consecutive daily sessions were sufficient to render the glottis perfectly free, and thus enable the patient to breathe without impediment. It was later found that the vocal cords were perfectly intact. The parts of the tumor removed, when examined microscopically, showed on their upper surface pavement epithelium and component parts of the mucous membrane with numerous acinous glands. The greater part of the tumor consisted of granulation tissue in which were found no microscopically characteristic tubercles, although a number of giant cells with bacilli were present.

During subsequent treatment I did not succeed in producing cicatrization of the operative wounds; on the contrary, the wounds on the false vocal cords were transformed into ulcerative surfaces, from which profuse granulations proliferated, but which did not at first materially affect the breathing. After treatment for a number of weeks, the patient returned home, with orders to employ antiseptic inhalations; but after forty or forty-five days she returned, accompanied by her husband, and presented quite as severe an inspiratory dyspnœa as in the first instance. The fact was speedily revealed that the larynx was again contracted by numerous granulation-tumors occupying the greater part of the glottis. These were removed in several successive operations, lactic acid in each instance rubbed into the ulcerated surfaces, and after four weeks the patient again departed with free respiration, though without complete cicatrization. According to the last report received at the close of last year (1892), she was well so far as voice and breathing were concerned, though complaining of aggravated cough.

Case 3.—Franz W——, 35 years old; came to the Polyclinic in May, 1892, for the first time; stated that for a number of months he had felt an unpleasant sensation in swallowing; during the last fourteen days dyspnœa manifested itself, especially when breathing rapidly. It should be added that a year before he suffered from pleuritis of the left side, recovering only after six weeks' confinement to bed.

Examination showed the left ary-epiglottic fold had become a tumor about the size of a nut, covered with intact, smooth mucous membrane, that was drawn into the larynx with each inspiration and thrown into the *sinus pyriformis* at each expiration. The tumor was very mobile and, in accordance with the character of the ary-epiglottic fold, connected with the latter by a band-like pedicle. The other parts of the larynx were perfectly normal; no trace of ulceration; both arytenoid cartilages moved promptly;

the voice was good. (Fig. 3.) The pulmonary apices were free, but lower down on the left side was a dullness over a space of

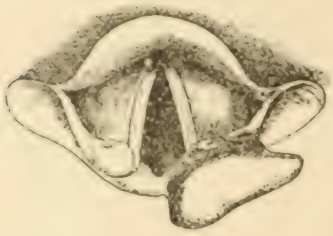


FIG. 3.

about a hand's-breadth, and debilitated breathing as the after-effect of the previous pleuritis. The diagnosis of laryngeal tumor was temporarily suspended, and the growth removed *in toto* with the laryngeal loop; after extirpation it seemed of softer consistence, and looked paler, than before—which might have been due, however, to the engorgement and œdema produced when tightening the loop.

The histological examination showed, as in Case 1, a perfectly intact covering of mucous membrane. The more profound parts of the mucous membrane, as well also as the sub-mucous cellular tissue, consisted for the greatest part of granulation-tissue, interspersed with tubercles and giant cells, in the latter of which a few tubercular bacilli were observable.

The wound in the ary-epiglottic fold caused by the operation healed completely within ten days. Unfortunately I did not again see the patient, and can report nothing of his subsequent history.

Case 4.—N. Abraham, 53 years old, married; never ill aside from an attack of typhus thirty years before; no record of tuberculosis in his family, and he denied having ever suffered any venereal disease. He manifested intense difficulty in swallowing—a condition he dated back to two years ago, when he swallowed a fish-bone, as he believes. After using a gargle and various inhalations the trouble disappeared, and since then he was not disturbed by throat difficulties in any form until three months before he presented himself at the Clinic, when, without appreciable cause, intense difficulty in swallowing again supervened.

Of feeble build, yet, aside from a lipoma on the right anterior region of the parietal bone, nothing remarkable presented on the surface of his body. Excepting a granulous pharyngitis, nothing abnormal in the throat; the laryngoscope, however, revealed the epiglottis had been transformed into a tumor of cyanotic color, with protuberances, and approximately as large as a nut. Apparently this proceeded from the left side, but so folded over to the right and covered the glottis that a glimpse of the interior of the larynx and an inspection of the anterior ends of the ary-epiglottic folds was out of question. The tumor felt hard; ulceration was nowhere observable. (Fig. 4.) The lymphatic glands

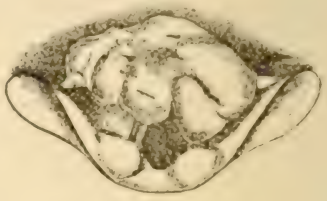


FIG. 4.

of the throat were not swollen. Percussion of the thorax revealed dullness in both pulmonary apices; auscultation detected slight rattling tones. For the sake of closer observation the patient was received into the Polyclinic hospital. Diagnosis of laryngeal tumor was temporarily left in suspense, but the possibility of a tuberculous character was conjectured, because of the condition of the lungs.

After applying cocaine to the tumor, the latter was removed in two sections, with the aid of the laryngeal loop, and down to the base of the tongue; hæmorrhage was minimal. In the separated tumor a portion of the fibrous cartilage of the epiglottis was contained.—Prof. Paltauf, who kindly examined the tumor microscopically, reported it as unmistakably of tubercular origin. The after-treatment consisted of antiseptic inhalations, and insufflation of iodoform powder, the wound cicatrizing completely within a little less than three weeks. I should add, with respect to the condition of the larynx ascertained, that only after the termination of the œdema accompanying the course of the wound did an ulcer become visible on the right ary-epiglottic fold, having been previously concealed by the tumor.

The improved condition, however, persisted but for a short time: after a very few weeks the tuberculosis manifested further progress in his larnyx: a pronounced infiltration of the false vocal cord and of the vocal cord supervened to the right of the ulcer, proceeding from the arytenoid fold. The general condition now became rapidly aggravated, and numerous râles were perceptible in both lungs. The patient left Vienna in a deplorable condition.

Case 5.—Rudolf N——, æt. 54; appeared in May, 1893; looked very much reduced and like an advanced consumptive; had been coughing for five years; repeated hæmoptyses; hoarse for four weeks and suffered from marked dyspnœa. Examination disclosed two conical tumors, about the size of a bean, by their broad side adhering underneath the right vocal cord—one directly under the anterior end of the cord, the other under the *processus vocalis;* both smooth at the surface, clad with mucous membrane; ulceration nowhere visible. (Fig. 5.) Inas-

FIG. 5.

much as the dubious condition of the patient excluded active therapy, I concluded to forego the endo-laryngeal operation and prescribe inhalations. He died a few weeks later.

Though this case did not come under protracted observation, and though the tuberculous character of the tumors was not established beyond objection, in the absence of microscopical examination, I yet hold myself justified in giving it tubercular classification, since this assumption is more than probable in view of the advanced pulmonary tuberculosis.

With respect to Case 1, it represents a very important form of tubercular tumor-formation, for it shows a very ordinary polypus, which we have hitherto regarded as the characteristic form of laryngeal fibroma, may develop on a tuberculous base. Avellis has cited several similar cases and has justly dwelt upon the fact that in consequence of such an occurrence the prognosis of laryngeal polypus must remain dubious until histological examination has been made, since, naturally, a tubercular polypus is to be regarded as something very different from an ordinary fibroma. As is shown by Case 1, after removal of the polypus the local cure was not permanent, infiltration and ulcerous degeneration of the vocal cord—the ordinary course of a gradually progressing laryngeal tuberculosis—again supervening.

What renders the diagnosis of these cases most difficult, is the fact (as shown by the cases cited from Gussenbauer, Schaeffer, Dehio, Gougenheim, Mandl, and Avellis), the lungs may prove intact at the time of the first examination of the laryngeal tumor, so that there is really no reason for questioning the benignancy of the growth presenting itself in the form of a fibroma or papilloma, until the disease is subsequently recognized either through the supervention of characteristic tubercular infiltrations in the larynx, or by pulmonary disease, or by histological examination. In a number of cases the tubercular tumors even appeared in the early forms of laryngeal tuberculosis, where modifications in the lung were not determinable, or were so minimal as not even to prompt special examination. In all my cases, by the parallel presence of pulmonary modifications, I was at least provided with a guide as to how the laryngeal tumors were to be examined, and why also their tubercular character could be assumed. Thus, it is important, in treating laryngeal tumor, to examine the lungs as carefully as possible, for in a given case it is the condition of the latter that alone leads to a correct diagnosis. In other cases, however, histological examination will be the only means of shedding light on the case, inasmuch as all these tumors, judged by their external appearance, are otherwise regarded as fibroma, or papilloma, or carcinoma where their nature is more diffusive. That an error in diagnosis may even prove ominous, is shown by the case of Gussenbauer, in which extirpation of the larynx was performed, carcinoma having been diagnosed, and this diagnosis, remarkable as it may seem, was verified by histological examination of pieces removed endo-laryngeally; and only after the patient had died of pulmonary tuberculosis was the true (tubercular) character of the laryngeal disease recognized!

With respect to the differential diagnosis between carcinomatous and tubercular tumor, Avellis is of the opinion that the latter is more common in youth, whereas carcinoma is more apt to attack people of advanced age. Whatever acceptance may be given to this theory in so far as it concerns carcinoma, it cannot be practically utilized in the treatment of tuberculosis, since all the five cases observed by me occurred at about the same

age—at an age, too, in which carcinoma of the larynx is wont to supervene. With the few cases that have thus far been observed, no general diagnostic principles can be established.

It remains to be added that in several instances where the disease had prevailed for a considerable time, besides the tumor in the larynx, infiltrations and ulcerations characteristic of tuberculosis were likewise to be seen. It goes without saying that in such cases the diagnosis is obstructed by no further difficulties.

Now, then, what position is occupied by this species of tuberculous tumor-formation in the category of ordinary tuberculous laryngeal diseases? The laryngoscopic tableau is indeed so very different from that of the every-day forms of laryngeal tuberculosis, that we might feel prompted to assign a special place to tuberculous tumors. And in truth we find in individual authors the opinion that the formation of tumors is preeminently peculiar to the so-called primary forms of laryngeal tuberculosis. Mandl, Dehio, Gougenhein, and also, in a measure, Avellis, have advanced this opinion.

In my cases there is assuredly no ground for such an assumption, since the lungs always presented determinable modifications; if we accept Case 5 as proved, it is even shown that a tumor may be formed in the larynx after long-prevailing pulmonary disease. To prove the assumption of the authors cited, that the disease in many cases was primary laryngeal tuberculosis, would be difficult—at least so far as past experience goes—on the basis of clinical observation alone, for primary laryngeal tuberculosis is a diagnosis which can be made with certainty only after an autopsy. At all events it is not to be disputed that, in the greater number of the cases observed, the formation of tumor manifested itself as a so-called early form of laryngeal tuberculosis—which is not to be wondered at. If the infiltration is to be regarded as the first stage of the anatomical modifications in laryngeal tuberculosis, the tumor is to be looked upon as a quite circumscribed infiltration which, for some time, presents for the most part a one-sided growth, and advances less according to surface. As a proof of this theory we may accept the subsequent course of the laryngeal tuberculosis observed in almost all the cases; for in the later stage there supervened further infiltration with decay, proceeding from the seat of the tumor.

Cases 2, 3, and 4 are remarkable on account of the peculiar form of the tumors, since in many respects they are different from those heretofore reported in literature. These were not circumscribed tumors seated upon the parts, but rather tumor-like degenerations of entire parts of the larynx. Thus, in Case 2, both the false vocal cords had degenerated into a tumor; in Case 3, the one ary-epiglottic fold; in Case 4, the entire epiglottis. In my judgment, these cases constitute anatomically, on the one hand, the transformation stage between the polypus-like, circumscribed, tuberculous tumors seated on the parts, and, on the other, the diffuse, ordinary infiltrations peculiar to tuberculosis of the larynx.

The prognosis of tuberculous tumors of the larynx coincides with that of the early forms of laryngeal tuberculosis. In most instances, local extirpation is speedily followed by relapse in the form of infiltration and ulceration proceeding from the seat of the operation, with corresponding aggravation of the lungs and general condition. This was the history of all the cases which I was enabled to observe for a considerable time, and this statement is corroborated by the observations of others. To be sure, relapse at times supervenes slowly, so that the process becomes one of distinctly chronic character, a lesser number of cases, however, showing strikingly favorable results. Aside from some cases in which months and even an entire year elapsed without relapse after removal of the tumor, several cited by Gougenheim and Avellis remained healthy for several years; such as the last-mentioned, however, seem to be the exceptions, the rule being that soon after the operation the tuberculosis progresses further in the form of an infiltration, and only in so far as the tubercle-tumor ordinarily represents an early form of laryngeal tuberculosis is its course to be considered as somewhat more favorable.

With respect to therapy: It is difficult to establish general laws, since the material of observation thus far obtained is much too

scanty, and the individual cases too varied in character, to permit of advancing definite therapeutic information. It goes without saying that so long as the tumor is circumscribed and can be removed endo-laryngeally, no other method can rightfully assert a claim, and only in those cases where this operation is impossible does laryngo-fissure seem indicated. Stoerk's case, however, as well as Case 2, shows how far we can at times proceed with the endo-laryngeal operation—which is possible, however, only when there are a number of favorable and coöperating factors. It is almost a rule that after removal of mere circumscribed tubercle-tumors, seated upon the parts, the wound becomes transiently cicatrized. This was observed in Cases 1 and 2, as well as in several cases of Avellis and others.

Dehio, however, has advanced the opinion—supported by a case wherein the patient died of acute pulmonary phthisis seven weeks after performance of laryngotomy for the purpose of removing the tubercle-tumor—that it is better not to remove these tumors, since through the wound thus produced, the bacilli, previously circumscribed, gain access to the organism. Even if it be not permissible to draw therapeutic deductions on the basis of a single instance, as does Dehio, the case yet furnishes food for thought, since in Case 3 cited by me, after removal of the tumefied degenerated epiglottis, rapid aggravation of the pulmonary process and the general condition supervened, despite the healing of the wound in the larynx. These unfavorable results could be connected with the size of the lesion produced, were it not that cases are reported by others—Schnitzler, Gougenheim, and Stoerk—in which, despite radical intervention, with favorable effect upon the laryngeal process, no unpleasant consequences resulted as regards the lungs and general condition—proof that the theory of Dehio cannot receive general application. The therapy of the tubercular laryngeal tumors, moreover, in an ultimate analysis, is found to be closely connected with the general question of the surgical treatment of laryngeal tuberculosis; and the further illumination of the latter will enable us to speak more definitely regarding the problem herein discussed.

Correspondence.

PSYCHISM OF THE SPHYGMOGRAPH.

To the Editor of the MEDICAL AGE:

DEAR SIR:—You are right in saying that the results of my researches with the sphygmograph open up another phase of "suggestion."

If I had merely observed likenesses between individuals, one at least of whom was sensitive or easily impressed, I would have had to be more cautious in making my claim to a great physical and physiological discovery; but where I know for a fact that sounds corresponding to the so-called "spirit raps" accompanied some of my most remarkable pulse identities, "suggestion," if acknowledged as the *vera causa*, must have a more comprehensive definition than that usually accorded to it.

The trend of the highest and deepest philosophic opinion is now in the direction of regarding the universe as having a spiritual basis—the universe being a manifestation of an underlying reality which cannot be, even symbolically, represented independently of the thinker himself. On such a ground-plan the otherwise absolute and impassable gulf between sensation and motion is transcended; motion of matter, molecular as well as molar, being that symbolic machinery, in and to our limited consciousness, whereby one part, aspect or phase of the unitary foundation of all things acts upon another; thereby corresponding to that human, and therefore more limited, machinery of suggestion, by words or other signs with a physical basis, through which one differentiated (and therefore apparently independent) spiritual unit acts upon another. Motion and suggestion, with all its implications, are identical, or at least correlative in the kingdom of the spirit.

Bishop Berkeley's "New Theory of Vision" was developed on the fundamental principle that "vision is the language of the Author of Nature"—a sublime conception—and has its enlarged counterpart in the hypothesis I am compelled to adopt for the inclusion of the facts of hyper-sensorial or rather hyper-optical vision, familiar to us under the name of clairvoyance, telepathy, etc., within the domain of scientific fact, namely: That that

which we have hitherto only regarded as molecular motion has its roots down deep in the spiritual substance, below the surface of appearances, of whose real changes it is the symbolic projection in correspondence with those molar or massive motions which constitute the language of the senses, particularly that of vision. In connection with such a philosophic conception the discovery of any new class of natural motions is of great significance, and particularly when such motion immediately postulates the physical linking of two separate nervous systems as its most immediate and rational explanation.

Granting that the pulse identities I have so frequently observed are causal and not casual, the hypothesis that permits the two organisms to become so far compounded through physical linkage has for its internal or psychical interpretation the community of the hitherto separate spiritual units, through the transcendence of certain facts of organization, such, for instance, as the temporary suppression of differentiating inhibitions, by whose intervention individualized spiritual being is separated and single. Such a view is at least rounded and consistent and is backed up by a vast mass of facts otherwise impossible to explain.

On the other hand, to suppose that the pulse identities have the same psycho-physical origin as the stigmata observed in hysterical and hypnotic subjects under the influence of verbal or inferential suggestions, would be to beg the very question itself; for some of my best identities were obtained through a solid wall, the subjects never having known anything about each other. Either the physical linkage was effected directly through the wall or psychically through me, who passed from one to the other, and so far may have been a medium of communication, this latter being a most improbable and difficult explanation. In any case the physical identity is the primary fact, and demands for its explanation the existence of nervous stresses in the ether.

The translation of the physico-mathematical functions of the ether of space into the corresponding order system of the internal universe of feeling is the work of the iatrometaphysician of the future. In the accomplishment of that design lies the fruition of Psychic Science.

Very truly yours,

JOHN E. PURDON.

Cullman, Ala., Oct. 25th, 1893.

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

REGULAR MEETING, Oct. 19th, 1893.

Doctor W. R. Henderson reported a case of diphtheria that died under peculiar circumstances. The child was apparently progressing well through a mild attack toward convalescence, when the mother applied kerosene oil on a cloth to the chest. By accident the cloth slipped to the back, where it produced a large raw surface upon which the diphtheritic deposit appeared accompanied by such severe systemic symptoms that fatality supervened.

Doctor E. B. Smith reported he had observed cases of diphtheria in which the deposit appeared in the eye and on abrasions on the face, but never had witnessed one where the exudation appeared so far from the initial deposit.

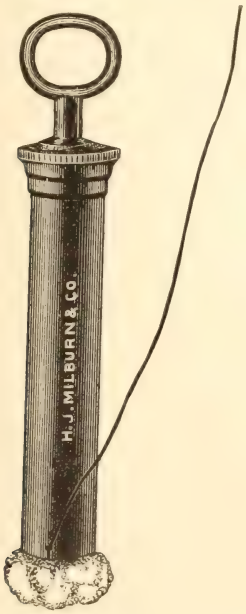
Doctor Smith also reported a case, now under treatment, which simulated lumbago except the pains were too darting for this malady. Also an operation performed on a child supposed to be suffering from croup; cyanosis and collapse demanded prompt treatment, and tracheotomy was performed, but while inserting the tube a wire eye from a dress was found in the trachea.

Doctor James Newell related a case with unique symptoms: A little girl suffered with pain, swelling and tenderness in and about the elbow. Believing it to be a case of rheumatism, he gave salicylates, under which the rheumatic symptoms subsided, but were succeeded by sharp darting pains in the chest, arms and face, simulating the lightning pains of locomotor ataxia, and could be controlled only by narcotics. The youth of the patient excluded the possibility of hysteria, hence he was inclined to consider the trouble of central origin.

Doctor J. S. Dean thought Dr. Newell's case one of general neuritis. Symptoms of both hyperæsthesia and anæsthesia are found in these cases—the former when the skin is touched by the finger or a rough-pointed instrument, the latter when the sharp points of the æsthesiometer are employed.

Doctor E. B. Smith exhibited a tampon placer, made for him by H. J. Milburn & Co., consisting of a hard rubber cylinder with one

open end and a piston fitted into the other; a slot in the open end allows the string of the tampon to pass through. Doctor Smith had



found it superior to other instruments for the following reasons:

It can be employed when the patient cannot make more than one visit to the office, or come oftener than once or twice a month, yet desires to continue treatment:

In those conditions when the physician finds it imposible, or the patient refuses, to have a speculum examination:

When the patient wishes to treat herself—though such should be discountenanced as much as possible:

Because almost any medicinal substance, fluid or powder, may be used with equal advantage:

In comparing this instrument with capsules as a means of applying medicinal substances, there are several objections accruing to the latter, viz.—capsules will not retain any fixed position, and therefore localizing of the application with precise certainty is impossible: Under certain conditions capsules are not soluble, and even when they are, the time required for solution is a great disadvantage, since time is often a prime factor in treatment.

Doctor J. S. Dean had employed Doctor Smith's instrument and found it superior to any device he had ever seen for placing a tampon behind the cervix in retroversion.—He had never been able to do this with Sim's speculum without an assistant.

R. H. HONNER,
Secretary.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., NOV. 25, 1893.

Editorial.

DEATH OF SIR ANDREW CLARK.

The death of this most eminent physician, which took place on the afternoon of November 6th, was a shock to the entire medical world—at least to the Anglo-Saxon portion; and yet it was not altogether unexpected, as the Associated Press announced his seizure with hemiplegia on the morning of October 19th.

Almost from the very moment of the seizure Doctors Russell Reynolds, Stephen Mackenzie, and Thomas Barrow were in attendance, and the best was hoped for, but on Friday, the 3d inst., a relapse occurred, from which time Sir Andrew grew gradually weaker, and on Sunday the last hope had fled.

Sir Andrew Clark was born in Aberdeen, October 28th, 1826. He was unfortunate enough to lose his father (also a physician) when about seven years of age, and was brought up under the care of uncles, and educated both in Aberdeen and Edinburgh, being highly distinguished as a student at each school, and carrying off prizes in many subjects. He also gained by examination one of the best bursaries in the University of Aberdeen.

After obtaining qualification he long served as the Assistant in Pathology to Doctor Hughes Bennett, and likewise acted as Demonstrator of Anatomy under Doctor Robert Knox. Later he became a member of the medical staff of the Royal Navy, but after a short period of service afloat, his special knowledge led to an appointment as Pathologist to the Royal Naval Hospital at Haslar, where he taught the use of the microscope in the investigation of disease. In 1853 he was appointed Curator to the Museum of the London Hospital, and later became senior surgeon, and, having obtained his Doctor's

degree at Aberdeen, settled in London as a practicing physician. He was elected a Fellow of the College of Physicians in 1858. His great ability and sterling character early made him a marked member in the profession. During thirty-five years of active practice he held in succession every office in the College of Physicians; after having been Croonian and Lumlenian Lecturer, Counselor, Examiner in Medicine, and Censor, he was in 1888 elected President, since which time he constantly held the office. Among other professional distinctions he was Lettsonian Lecturer to, and President of, the Medical Society of London, and President of the Clinical and Royal Medical and Chirurgical Societies. He was made LL.D. of Cambridge, Edinburgh, and Aberdeen, a Fellow of the Royal Society, and an Honorary Fellow of King and Queen's College of Physicians in Ireland. In 1883 he was created a Baronet.

In all his professional relations, whether to his patients or his medical brethren, Sir Andrew Clark's life was an example of devotion to the highest sense of duty. No pressure of work ever permitted him to neglect the thorough investigation of a serious case, and no opportunity of self-advancement ever induced him to be less than just, or even less than generous, to those whom men of small mind might have looked upon as rivals. He possessed an insight into the hidden causes of disease which might correctly be attributed to genius; but the faculties due to genius had been cultivated with assiduous and untiring industry.

As a teacher his most remarkable power was his mastery of just and appropriate language, his aptness at expressing even familiar ideas in new and striking phraseology, or still more, in rendering the unfamiliar intelligible by the lucidity of his words. To meet with him at the bedside over the simplest case was an intellectual treat to which all students looked forward with pleasure when they had once enjoyed it, and many of his happiest phrases and epithets have come to be employed as recognized technicalities in the profession.

His sympathy with sorrow and suffering was unbounded. In whatever position he was placed, whether as consultant, as teacher, physician or lay associate, he gained what can only be described as the warm and unstinted affections of all who knew him. His pupils regarded him as the truest and most trustworthy of friends; and the assistance which he rendered them, both by counsel in their difficulties, and often when necessary in a more substantial way, was at once delicate and unstinted. He leaves behind him the record of a blameless life only too soon withdrawn from a career of exceptional usefulness and kindness.

SURGERY IN IDIOCY.

"The Surgical and Medico-Educational Treatment of Juvenile Idiots and Backward Children" is the title of an article presented to the French Academy of Medicine by Doctor Bourneville, and is most interesting historically, as well also as an evidence of the growing ascendancy of surgery even within the domain of psychological therapeutics. Herewith is appended an abstract of the chief points as presented by Le Progrès Médical:

"The first craniectomy on an infant idiot was practiced by Dr. Fuller, of Montreal, in 1878, with a view to allow of brain expansion.

"Twelve years later, in a communication made on a similar case of premature synotosis, M. Guéniot gave expression to the view that an operation might be advantageous in analogous cases.

"In 1890 Professor Lannelongue practiced his first operation on a little girl, æt. 4, and made known the results obtained in a communication to the Academy of Sciences. His operation had the same object as Dr. Fuller's, viz., to facilitate the expansion of the brain, and thus allow a free development of structure and intellectual function.

"M. Lannelongue has made further communications twice from the point of view of the operation itself, and sums up his results to date. The results are as follows: Twenty-five operations, twenty-four recoveries. The mean time of recovery from the operation was ten days. One died at the end of eight hours. The youngest was a boy of eight months, the oldest 12½ years; thirteen were boys and twelve girls. With regard to the after-effect on intellectual, moral, and physical development, M. Lannelongue has yet to redeem his promise to publish results after a sufficient time for further study had elapsed.

"Since the date of these operations many followers have tried like experiments in England, and in the United States especially; and in the article now referred to appears a compilation of results from various sources, Of eighty-three cases, fifteen died. In several cases convulsions and limited palsies followed the operation. The results are so far vitiated by the fact that, while some records are carefully prepared, and full of information respecting the intellectual development before operation, others are not. With such mixed material, therefore, the writer feels handicapped in attempting to establish comparisons and to appreciate the scientific and practical value of craniectomy."

The article, which is profusely illustrated, gives a concise and thorough summary of operations and results, and is well worthy of careful perusal and study.

THE BACTERIOLOGICAL CRAZE.

"This is the age of germ rabies, and stark madness has overtaken the hygienists and the public with reference to bacteric infection. Every ounce of water we drink and every cubic foot of air we breathe is supposed to be scientifically assayed, and if more bacteria than the approved minimum are found, we are threatened with terrible consequences.

"The joke of the matter is that the people who are the victims of the craze do not seem to be able to see farther than their noses. They are in agonies of apprehension lest their milkman may have diluted his liquor with bacteria-laden water, and they excessively excite themselves if the cubic content of their sleeping-rooms is below the scientific minimum, but they pay no regard to the fact that, from morning to night, they are imbibing monstrous doses of bacteria through other media. They never think of the danger of carrying about their person a bank-note which has been bosomed for unlimited time by a reeking fishwoman or costermonger; they box themselves up in a theatre or concert-room packed with inconceivable myriads of germs of all sorts of diseases; they suck grapes which have passed through an endless series of dirty hands, and they smoke cigars which have been lately grasped between the lips and fastened with the spittle of, perhaps, a phthisical tobacco-worker. Lastly, they will cool their glass of champagne at the most *distingué* dinner party with the ice recently frozen off a ditch which is little better than a cloaca, and they trouble not themselves about its bacteric befoulments.

"We are not to be understood to discourage precaution against the use of foul water or foul air. It is well to be clean, even though we cannot be of spotless purity, but there is no doubt that the bacteric hobby is, at present, being ridden to death, and that any of us who survive for another twenty years will then laugh heartily at the fashionable craze of to-day, just as we now laugh at the iridectomy mania, Koch's tuberculine, or any of the equally *de rigueur* crazes of the past twenty years."—*Medical Press and Circular.*

NOSTRUMS—"CHEMICAL COMPOUNDS."

Merck's report disposes of a uumber of modern nostrums which have been introduced as antipyretics and antiseptics, and which for the most part, on investigation, have proved to be only simple mixtures varying as to proportions, thus:

"Anticol" is found to consist of 75 per cent. of acetanilid, 17.5 of bicarbonate of soda, and 7.5 per cent. of tartaric acid.

"Anticylic acid," claimed to be antipyretic and anodyne, is merely a mixture of antipyrin and salicylic acid.

"Antidiphtherin," upon examination was found to contain potassium chlorate and a trace of ferric chloride.

"Antinervin" (so-called *salicyl-brom-anilid*) is, according to E. Ritsert, a mixture of one part of ammonium bromide, one of salicylic acid, and two of acetanilid.

"Antiseptin," also known as *zinc boro-thymol-iodide*, according to Goldmann consists of 85 parts of zinc sulphate, 2½ of zinc iodide, 2½ of thymol, and 10 of boric acid. This must not, however, be confounded with "Antiseptsin," which is chemically *para-mono-brom-phenyl-acet-amid;* nor with "Antiseptol," which is *cinchonin iodo-sulphate.*

"Aseptin" is said to consist of boric acid, borax and alum.

"Camphol" to be merely a mixture of camphor and salol of varying proportion.

"Exodyne," according to F. Goldmann, is nothing but a mixture of 90 parts of acetanilid, 5 of sodium salicylate, and 5 of sodium bicarbonate.

"Phenolid" is a mixture of 58 parts of acetanilid and 42 of sodium salicylate.

"Quickine," according to the Pharmaceutische Zeitung, is one part corrosive sublimate, 50 carbolic acid, and 52 dilute alcohol.

"Somnal" is reported to be merely a solution of chloral and urethane in alcohol.

Truly an unwholesome lot! We may well ask: What will the harvest be a decade hence if the rage for these and kindred preparations continues?

SARACA INDICA, LIN. (Syn. JONESIA ASOCA, ROXB.).

The native name Ashoka applied to this tree signifies "free from pain," and probably has some reference to its popular use, as we are very indefinitely informed that it is "specially useful in diseases of women connected with menstrual irregularities."* Dymock, in Pharmacographica Indica, vol. i, p. 508, informs us that the bark of this tree "is much used by Hindu physicians in uterine affections, and especially in menorrhagia." The latter authority also gives the method in which it is used by the native practitioners, which is as follows: Eight tolas (=3¼ oz. Av.) of the bark are boiled with eight tolas of milk and thirty-two tolas of water until the latter has evaporated. "This quantity is given in two or three doses during the course of the day in menorrhagia." The dose given thus would be in the neighborhood of an ounce of the crude drug equivalent. Its properties appear to be purely astringent.

ITEMS AND NEWS.

Antiquity of Syphilis.—

Doctor George McLean writes the Kansas Medical Index that while examining a number of skulls of cliff-dwellers, he discovered on the side of one a patch of necrosis showing unmistakable signs of syphilitic origin. "As I stood transfixed before that silent monitor," he adds, "the thought flashed across my mind, 'there is nothing new under the sun.' Here confronting me was the ocular demonstration of the existence of a people, by far the superior intellectually of the red man of the plains of our own time, of whose history we actually know nothing. They may have lived, flourished, and died, centuries before Columbus thought of a continent existing toward the setting sun. Thus is handed down the evidence of the contamination of one of the horrors of what we are pleased to term 'our modern social evil.'"

Fashionable Quackery.—

Sir James Crichton Browne, in his address before the Sheffield Medical School, in alluding to medical ethics expressed the opinion that the present widespread patronage of quackery is a real humiliation to the medical profession. "It is patronized in high places, but the very hot beds of it are our fashionable watering-places and health resorts." Sir James declares "our learned clerics are most addicted to it—the skilled artisans the least"—and he thinks these clerics should "seriously reflect that in giving countenance to nostrums they exhibit a credulity and superstition that must seriously impair their usefulness in their sacred calling with all thoughtful men."—*British Journal of Dental Science.*

Pasteur and Hydrophobia.—

M. Pasteur reports that in the year 1892 he treated 1,780 persons for rabies, of whom twenty-six came from Great Britain and Ireland. Commenting on this, the Medical Press and Circular says:

"If from this twenty-six we deduct the cases in which the disease was only imagined by the person bitten, we may reasonably assume that not more than, say, half a dozen genuine cases went from England to Pasteur; which confirms our repeated statement that hydrophobia is practically non-existent in Great Britain, and that all the hubbub about dog-muzzling is hysterical nonsense."

Book-Making.—

A well known physician, not by any means a cynic, is responsible for the statement that nine-tenths of all medical works published in the United States are the work of men who have not enough practice to occupy their time. Perhaps the statement is a little broad; but it is nevertheless a fact that a great deal of our latter-day medical literature is absolutely lacking in thought and originality. The need now is not for new repertoires, new arrangement of old material, new "rehashes" of well known matter, but for new and precise work along the lines laid down by great teachers.—*The Chironian.*

*Quotation given by Dr. Waring in article original in British Medical Journal, and copied in THE MEDICAL AGE, 1880, p. 67.

Why General Practitioners Hesitate to Take Patients to Specialists.—

"I took a little patient to a specialist on skin disease, who examined the child, meantime addressing all his remarks to the mother, and when he was through handed her the two prescriptions he wrote. I was wholly ignored. No man should be recognized as a member of our profession who is not first of all a *gentleman;* but some cannot be that because in spite of their medical training they have not been able to eradicate the boorish element of their nature."—Doctor C. L. Burke, in *Kansas Medical Index.*

A New Innovation in Medical Meetings.—

The Congress of Norwegian Physicians, which recently convened at Christiania, held its sessions on a steamer which moved from place to place, whereby the members were afforded fresh air and change of scene while pursuing their scientific work. One of the district societies of Michigan, some years since, adopted this same plan when meeting at cities and towns on the Great Lake chain. The example is worth following for midsummer congresses and societies.

The American Medical Publishers' Association.—

This organization will hold a meeting in Cincinnati, Ohio, on Monday, Dec. 4th. The Secretary urges that every medical publisher be present in person or by proxy, "in order that measures may be adopted concerning questions at issue."—Doctor F. King, Secretary, 218 East Thirty-fourth Street, New York City.

Suspicious.—

Mrs. Bodkin: Don't interrupt your father now, Clara; he's busy.

Clara: What is he doing?

He's trying to thread a needle.

Will he succeed?

No; but he'll say something presently, and you needn't stay to hear it.—*Judge.*

A Brainy Therapeutist.—

A native of Georgetown, Md., has the following sign on the front of his store: "Born with brain within Brain I can Kure enny kind of Misery in a short Time with only the Best erbs to be used."

Book Reviews.

THE ANNUAL OF UNIVERSAL MEDICAL SCIENCES FOR 1893. Edited by Doctor Charles E. Sajous. Five volumes. Cloth, 8vo. Price, $3 per volume. The F. A. Davis Co., Philadelphia.

This work is a "yearly report of the progress of general sanitary and medical sciences throughout the world," in the compilation of which Doctor Sajous is aided by something like one hundred associate editors, who again are assisted by double the number of corresponding editors, collaborators, etc. The present issue is the sixth of the series, and sustains the reputation already gained by the others. We have drawn the attention of our readers in previous years to the excellence of this publication and the magnitude of its scope, and do not doubt that it is already upon the library shelves of the majority. No medical man who desires to keep pace with the advance made by the medical sciences during the previous year can afford to neglect this store-house of information, where everything is carefully arranged by skilled hands and made easy of access; a glance through the series would probably save our societies many lengthy discussions on exploded theories. The illustrations are most excellent, supplemented in many instances by colored plates or chromo-lithographs. Space will not permit us to refer to the individual parts of the work in detail, but our readers will find it to their interest to do so, for whether they turn to the medical, surgical, anatomical, physiological, or other sections, they will have the latest and most important information before them—wheat of the world's gainings in medical progress carefully winnowed.

SCRIBNER'S MAGAZINE. Price, 35 cents. Scribner & Co., New York.

The November number opens with a picturesque travel sketch by Colonel Colville, of the Grenadier Guards, who gives his experience "In Camp with the Katchins"—a tribe living near the Chinese frontier of Upper Burmah.

Among the articles thoroughly American appear "The Picturesque Side," by F. Hopkinson Smith (a pen and pencil sketch of

the World's Fair), and "The Historic Moment" series by Isaac H. Bromley, outlining recollections of the nomination of Lincoln.

Augustine Birrell gives an intimate inside view of "The House of Commons;" Katharine De Forest expatiates upon the present conditions governing "Education of Girls in France;" F. N. Doubleday concludes his "Glimpses of French Illustrators;" Ida M. Tarbell, who, through her acquaintance with members of the Roland family, has had access to much hitherto unpublished material, writes of "Madame Roland;" in "Mr. Freeman at Home" Delia Lyman Porter gives new impressions of the great historian, and shows that behind a brusque manner was a most kindly and generous man.

The fiction of this issue includes two short stories by Octave Thanet and Martha McCulloch Williams.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this work has reached its *eighth edition* is sufficient evidence of its popularity and practical usefulness. In size and shape it is by long odds the most convenient and the best of all of the "Visiting Lists;" it will not break down in the pocket. A prominent feature is the absence of all "dead-wood" and advertisements, and the extremely convenient arrangement of most practical contents. The information most demanded for ready reference is to be found upon the inside covers or on the fly leaves. The posological information is to a great extent a new departure, being very thorough and complete; further, it is newly revised, and embraces the very latest (including the non-official) remedies introduced, up to and inclusive of 1893. Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, loss, etc. Paper and binding are alike superb.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 a year. S. S. McClure, Limited, New York City.

The November number contains a "Dialogue between Frank R. Stockton and Edith M. Thomas," recorded by the latter; a Ghetto tragedy entitled "Incurable," by I. Zangwill; portraits of A. Conan Doyle, R. E. Peary, U. S. N., Camille Flammarion, and F. Hopkinson Smith; "The Personal Force of Cleveland," by E. Jay Edwards; "Patti at Craig-y-Nos," by Arthur Warren; "Once Aboard the Lugger," anonymous; "Four Hundred Degrees below Zero," by Henry J. W. Dam, which gives a most interesting account of an interview with the great chemist James Dewar; "The House with the Tall Porch," by Gilbert Parker; "The Brontës al Fresco," by Doctor William Wright; "The Hypnotic Experiments of Doctor Luys," by R. H. Sherard, who seems to know nothing of the exposé of this pseudo-savant's methods by Doctor Ernest Hart; "The Surgeon's Miracle," by Joseph Kirkland.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. The Lippincott Co., Philadelphia.

The complete novel in the October number is "The Hepburn Line," by Mary J. Holmes—a pleasing tale of an old Kentucky family and a neglected heroine who comes to her own at last. The eighth in the series of notable stories is "A Deed with a Capital D," by Charles M. Skinner. Other short papers are "Poor Yorick," by Robert N. Stephens, and "The Pass'n's Grip," by Roswell Page, both illustrated; "Two Belligerent Southrons," by Florence Waller, a narration of the bloodless duel between Clay and Randolph; "An Hour at Sir Frederick Leighton's," by Virginia Butler; "Necromancy Unveiled," and "Confessions of an Assistant Magician," by M. and Mme. Hermann.

THE NEW PETERSON. Price, 10 cents; $1.00 per year. New Peterson Publication Co., Philadelphia.

The issue for November is an exceptionally good number. Octave Thanet's complete novelet, "The Judgment of Mrs. Swift," is one of the most brilliant efforts of this gifted writer. "The Heart of the West Indies," by Dr. William F. Hutchinson; "Women of the Salon," by Helen E. Drew; and "The English Pre-Raphaelites," by Edouard Rod, are among the illustrated articles, all of which are exceedingly interesting.

CHEMISTRY AND PHYSICS. By Joseph Struthers, Ph.D., D. W. Ward, Ph.D., and Charles H. Willmarth, M.S. Cloth, 16mo. Price, $1.00. Lea Brothers & Co., Philadelphia.

This volume deals with those facts in chemistry and physics which are requisite to a medical education. The various matters are presented tersely and pointedly in the form of questions, which are answered with equal clearness. The book is well illustrated. Teachers as well as students may gain considerable advantage from the use of this manual; in fact, its value far exceeds the modest price asked, which is rendered possible only by a large sale.

Therapeutic Brevities.

Hay Fever.—Doctor Price-Brown, of Toronto, in one instance found a portion of the uvula the starting-point of reflex disturbance. He gives his patients weak solutions of cocaine first, following with menthol for local application.

Doctor J. O. Roe, of Rochester, believes there is a local lesion in every instance—does not believe in "neurotic" cases. Says the cautery is good only in vascular turgesence. Only the point of a projecting turbinated bone giving pressure should be taken off.

Doctor S. S. Koser, of Williamsport, Pa., finds tereben, internally, of service. Also, as a sedative measure, inhalations of carbolic acid and camphor in chloroform. Does not regard the cautery as permanent enough in effects.

Doctor J. H. Bryan, of Washington, believes it impossible to permanently relieve neurotic cases.

Doctor E. Fletcher Ingalls, of Chicago, uses the cautery two or three weeks before the attack, so as to have healing complete before its onset; he employs it superficially, like a blister, so as to avoid the formation of cicatricial tissue. Internally he gives phosphate of brucia, camphor, hyoscyamus, quinine, etc., beginning one week before the attack.

Doctor John N. Mackenzie, New York, says the "pollen" theory has been, in his opinion, a bar to the proper conception of the disease. He sees cases where there is no lesion in the respiratory tract in the intervals between the attacks. Pressure irritation is more liable to produce atrophy than hypertrophy. The various forms of rhinitis, hyperesthetic, vaso-motor, etc., should all be classified under one heading. He employs nerve tonics, such as quinine, phosphide of zinc, and nux, before meals, with Fowler's or Donovan's solution of arsenic after meals. Such a treatment will often clear up mild cases. If disease occurs in any part of the respiratory tract, it should of course be removed. The cautery should be applied to any sensitive areas.—*Medical Record.*

Paracentesis in Pleurisy and Pneumothorax.—Dr. E. R. Watkins, of Nottingham, advocates paracentesis in all cases of pulsating pleurisy and pneumothorax. A girl 18 years of age became strained by lifting; there was a sensation of something having given away, and pain in the side and back. A distinct pulsation or heaving was noticed in the thoracic parietes, and the hand when applied to the left side was forcibly lifted at each throb. Ten ounces of pus were removed from below the inferior angle of the left scapula, and a drainage tube inserted, with ultimate complete relief.

Another case, aged 26 years, had "wrenched his insides," and the pain was referred to the left chest wall. There was evidence of great intra-thoracic pressure, and the left side was distended, the heart being pushed over to the right. On tapping, a quantity of air escaped, followed by twelve ounces of purulent fluid. Improvement was rapid.—*The Lancet* (London).

Post-Partum Hæmorrhage.—Doctor Ernest Herman declares that "plugging the uterus with iodoform gauze, after the new German method, is dangerous; sudden death is likely to supervene through entrance of air into a uterine vein while the gauze, is being put in place. Continuous compression is the best and only remedy when the contractile power of the uterus is exhausted. The right way to employ this is to compress the uterus between one hand in the vagina, the other on the abdomen. Bend the fingers of the left hand into the palm and grasp the uterine body between the right hand on the abdominal wall and the firm resting surface formed by the closed fingers and volar prominences of the left hand in the vagina."—*British Medical Journal.*

[All of which is worthy of consideration, yet where post-partum hæmorrhage is dependent upon inertia the latter may be overcome almost as by magic by the use of Normal Liquid Cannabis Indica in doses of from fifteen minims to one-half drachm, according to demand.—ED.]

Uses of Sulphurous Acid.—Doctor Arnott, London, before the Canadian Medical Association, declared he has profited most by learning new applications of old remedies. Sulphurous acid is an old remedy, and particularly useful in typhoid fever if employed freshly prepared, and early in the disease. He would give from one-half drachm to a drachm every two hours, or even more if the patient can bear it. Since employing it he has not lost one per cent. of his cases. He considers Sulphurous Acid *the* remedy for typhoid; also finds it extremely useful in early phthisis, and was led to its use in this disease by the fact that consumptives who labor in sulphuric-acid works, generally improve in health. It does not disturb the stomach.

A New Solvent for Uric Acid.—Recent experiments indicate tetra-ethyl-ammonium possesses marked solvent power over uric acid, and is perfectly safe for internal administration. It is a definite inorganic compound, occurring in deliquescent hair-like needles, absorbs CO_2 from the air, is strongly alkaline, saponifying fats; is as bitter as quinine. Concentrated it burns the tongue, and has caustic action upon the epidermis.

Internally a solution of 10 per cent. may be employed in doses of ten to twenty minims by the mouth, or ten minims of a 1-per-cent. solution may be injected hypodermatically. This preparation must not be confused with tetra-*methyl*-ammonium, which is poisonous and gives rise to symptoms similar to those of curare.—*Philadelphia Polyclinic.*

Sea-Sickness.—The Quarterly Therapeutic Review remarks that a pill of cascara sagrada one-half grain, extract nux vomica one-eighth grain, extract belladonna root one-eighth grain, and sugar of milk one grain, taken before dinner and at bedtime, frequently overcomes sea-sickness.

For those who prefer a fluid medicament the following is recommended: Extract cascara fluid (1887), tincture nux vomica, tincture belladonna, aromatic spirit of ammonia, spirit of chloroform, of each one ounce; dose, one-half to one teaspoonful in water. "For a laxative aperient at sea of more than immediate temporary value this is hard to beat.—*Crede experto.*"

Spasm of the Glottis.—The late Morell Mackenzie outlined a successful mode of treating this alarming and dangerous condition. He proposed to set up a rival reflex whereby the laryngeal spasm—itself a reflex and usually due to peripheral irritation—might be immediately overcome. This is accomplished by giving the sufferer a liberal pinch of snuff or pepper, or, failing either at hand, tickling the mucous membrane of the nares until sneezing is induced. With the sneezing paroxysm the spasm of the epiglottis is relieved, and the patient quickly falls asleep breathing with all the freedom of a new-born infant. This treatment is logical as well as practical.—*Hospital Gazette.*

Creasote in Phthisis.—Creasote when pure is harmless:

It has no direct action upon the tubercle bacillus:

Tuberculosis of the lungs is chiefly a secondary infection by a streptococcus:

Creasote has no direct action upon this streptococcus; hence none whatever upon hectic fever:

It destroys lower organisms, usually those which produce fermentation without affecting the process of digestion.

Hence the virtue of this remedy (which is undeniable in most cases) is chiefly, but not wholly, upon nutrition.—Doctor James T. Whitaker, in *Therapeutic Gazette.*

Pineapple Ferment, Bromelin.—The proteid-digesting power of pineapple juice is manifested in fluids of all reactions, acid, alkaline, and neutral, the ferment being in this respect a trypsin rather than a pepsin; it acts, however, most strongly in a neutral solution. The proteolytic ferment may be separated by saturation of the neutralized fluid by sodium chloride or magnesium sulphate, the former being the preferable method. It appears to be a mixture of a globulin and a proteose. Bromelin (adapted from *Bromeliaceæ*) is a digestive ferment extracted from the juice of the pineapple, similar to papain or papoid.—*Quarterly Therapeutic Review.*

Ether Anæsthesia.—In many of the London hospitals it is the custom to primarily induce anæsthesia by nitrous oxide, and to continue the condition by means of ether. It is claimed the results are quicker, more comfortable to both operator and patient, and involve much less quantities of ether than by the old and more direct method. Great stress is laid upon having the ether fresh for each occasion; the remaining portion in the bottle is never used the second day. Clover's inhaler is chiefly used, though Ormsby's and Junker's have many advocates.

Eucalyptus-Thymol Antiseptic in General Surgery.—This thoroughly cleanses the hands and all instruments. Its odor, far from being unpleasant, is quite the contrary. It may be sprayed throughout the room and upon the parts to be operated upon. A wound may be treated by either spraying or by direct application, and thus rendered entirely aseptic. The final dressing may conform to any of the particular preferences of the surgeon.—*Glasgow Medical Journal.*

Constipation.—A good combination for this trouble, remarks the Kansas Medical Journal, is Cascara sagrada and Asafœtida, but the dose, being so variable in different individuals, is sometimes hard to regulate until a few trial doses have been given. Whatever the remedy employed, the dose should be as small, and as seldom repeated, as possible. Sometimes Glycerin in the form of suppositories will succeed best.

Quinine as an Application to Wounds.—Dr. Alfoldi (Nouveaux Remedes) is convinced a one-per-cent. solution of Quinine Muriate is a more rapid detergent and cicatrizant in infected wounds than either corrosive sublimate or iodoform. Wounds that are free from infection heal with astonishing rapidity under the use of this solution.

Ammoniated Mercury in Freckles —Accord to Hagar, by the application every other day of an ointment composed of ammoniated mercury and subnitrate of bismuth, each 1 drachm, and glycerin unguent ½ ounce, freckles can be removed.—*Popular Monthly.*

Normal Liquid Belladonna.—In asthma where the secretions are profuse and the breathing labored, Normal Liquid Belladonna is the remedy *par excellence.* It stimulates the respiratory centres and sympathetic ganglia.

Itching of Urticaria.—Doctor Aourdeaux employs equal parts of lime-water, laurel-water, and glycerin. He sops the parts well, then covers with absorbent cotton without wiping. The relief is almost immediate.

Cocillaña.—In diseases of the respiratory organs, this drug is superior to apomorphine, preferable to ipecacuanha, and safer than pilocarpine.—*Quarterly Therapeutic Review.*

Acetanilid.—It is said Camphor will overcome the depressing effects of this drug. A more agreeable and no less effective addition is Caffeine.

Medical Progress.

Upon Horse-Pox Affecting the Cow.—Doctor Adami brought this subject before the Montreal Medico-Chirurgical Society recently, because at the present moment great interest is being manifested in the subject of vaccinia and the various diseases allied to or liable to be mistaken for it.

In Montreal, horses are very subject to horse-pox, and especially during this winter has the disease assumed the character almost of an epizoötic. Dr. Adami himself had seen as many as twenty cases. It would seem to come on just about the time of a thaw, when the horses in their work about the streets are very much exposed to partly frozen water about the lower portions of their legs. Many of these cases this winter have been associated with the production in the groom, or those attending the horses, of definite eruptions, very similar to the true vaccinial pox. Dr. Bell and others could give records of grooms and others going to the hospital with pocks on the hand, lips, and face obtained in this way.

A case in question was one which occurred in the stable of Mr. Strathy, a gentleman who has well-kept stables. Unfortunately both his horses were attacked with horse-pox. Now it is the custom in Montreal with many people to keep a cow in the stables with the horses, for greater warmth as well as for domestic convenience. Such was the case in Mr. Strathy's stable, and the cow was milked and tended to by the groom who looked after the horses. One horse had the pox about ten days, the other the greater part of two weeks, when it was noticed one Monday that there was upon the two posterior teats of the cow a small papular eruption. On Wednesday Mr. Baker very kindly showed Dr. Adami the cow; the papules had then become distinct vesicles, and on the Friday following they showed well-marked scabs. There was a certain amount of inflammation in the vicinity; but this had been reduced to a minimum by the cessation of all manipulation of the udders and by employing a milk tube to draw off the milk. The scabs were very characteristic, and accorded wholly with the classical pictures given of the true cow-pox affecting the udders and teats of the cow. The history seemed to be most clear. The stable was outside Montreal; the horses and cow were kept apart from all other animals, and they were attended to by the same man; the cow showed the characteristic eruption. It would seem most probable that here we were dealing with a case of horse-pox com-

municated to the cow by the milker, who was at the same time groom. A week previous to the meeting Dr. Adami had inoculated a calf with the scabs rubbed up in glycerin, and again with the knife that he had employed in removing these scabs, with the result that on that day there were to be seen on the latter well-marked typical vesicles, some beginning to dry up, some becoming slightly pustular, such as one gets in vaccinating the cow for the purpose of obtaining vaccine lymph.

This is a subject of extreme interest. One hundred years ago Jenner declared that cow-pox was produced from horse-pox. On further investigation it was seen that he had made a mistake, that he had inoculated "grease" instead of horse-pox, and ever since the anti-vaccinationists have availed themselves of this circumstance as a fruitful source of derision in their attacks. Since then there have been many workers in this line, but the conclusions drawn have been very vague ones. He thought that the present case afforded an opportunity of doing some good work in clearing up the difficulty and establishing the identity or separate status of horse- and cow-pox. Having once obtained a cow-pox from a horse, as we almost surely have done, and then by inoculation from the cow obtained typical vaccinia in the calf, if some human being will allow himself to be vaccinated by this lymph from the calf, and typical vaccine vesicles or pustules are obtained. Dr. Adami held that he would go near to prove that these two conditions are identical. It is an experiment well worth carrying out, especially as there is a commission now working on this subject in London, and so far they have been able to arrive at no very definite results. Dr. Adami expresses his indebtedness to Dr. Baker for much assistance in this case.

Dr. James Bell saw two cases during the winter of horse-pox in grooms. The first man came with a sore on his lip; it was large, hard, and indurated, with depressed, umbilicated, vesicular surface; enlargement of the lymphatic glands beneath the jaws. It was at first regarded as a hard chancre, though the man persistently denied any confirmatory history. Finally, on learning his occupation and whom he worked for, his case was better understood. No doubt it was a case of horse-pox. He was a groom to a gentleman whose horses had been afflicted with the disease this winter. Moreover, the subsequent history and development of the case confirmed the diagnosis of horse-pox.

The other case was seen some time after the foregoing, and, with the benefit of this experience as a guide, a diagnosis was more readily made. His was a sore thumb, and although the history is not so reliable as in the first case, still he (Dr. Bell) was practically sure it was a case of horse-pox.

Now, if it can be inoculated on the groom it can be inoculated on the cow, and this is another link in the evidence going to prove the identity of small-pox in the different species of animals, only modified by the special organism in each case. He asked for some information as to a differential diagnosis between "grease" and "horse-pox" in horses. It seems rather suspicious that horse-pox should be so prevalent in horses at a time of the year when they are exposed to wet and damp weather, which is known to be the cause of "grease" in these animals; or, in other words, that a good many cases of "grease" are diagnosed as horse-pox.

Dr. D. J. Evans said that a case of this kind came under his observation. A groom who was attending to three horses, all of whom were afflicted with the pox, happened to get a slight scratch on his hand. At the seat of the scratch a little inflammation was noted, with some slight constitutional febrile disturbances; a vesicle formed, which in a few days became pustular, when it broke, and a marked little ulcer remained. The ulcer finally healed up, and left a distinct cicatrix behind.

Dr. Kirkpatrick asked if horse-pox protects against smallpox in the same way as when the vaccine has passed through the calf.

Dr. Gurd referred to a case he had seen about eight years ago. A groom, while attending to some horses suffering from this disease, was accidentally inoculated in the cheek. An inflammation followed, and a typical vesicle was developed. The cheek began to swell considerably, and, being so close to the eye, he began to fear an injury to his sight, and went to Dr. Buller, who no doubt can corroborate these statements.

Dr. Smith, referring to the differential diagnosis between horse-pox and "grease," thought that the course and termination was sufficient to distinguish them. Horse-pox does not last two or three months, as "grease" often does. Like all the acute fevers, it is a self-limited disease. "Grease" is looked upon as the result of neglect on the part of the groom to properly dry the horse's feet.

Dr. Elder thought there were still one or two links wanting to complete a valuable piece of evidence. He understood that the groom did not have the pox at all, and it seemed that the connection between the sickness of the cow and that of the horses was

not clearly established. There is nothing more common than for cows to have cow-pox, and that this cow should have it at the time that the horses had horse-pox may at the most be only a coincidence. If the pox had been taken from the horse and put into the calf, then it would have been a direct piece of evidence. As it is, the calf was inoculated from the cow, and the resemblance of the calf's disease to cow-pox may, after all, be due to that, and not horse-pox, being the true malady of the cow.

Dr. Adami stated that this was purely a preliminary communication, and the experiments reported are only the beginning of a series of experiments. He had already taken material from the horses, also a scab from one of the grooms that has had horse-pox, and intended inoculating them in cows. With regard to the matter of "grease," one important point is the duration of the disease. "Grease" is a long disease; it does not have the stages of horse-pox. Horse-pox is a papular eruption, followed by the coalescence of the papules, the formation of vesicles, and the development of the vesicles into pustules. Finally you have the rupture of these pustules, the formation of little ulcers, and the healing of these ulcers, leaving behind a permanent cicatrix. "Grease," on the other hand, is not characterized by pustules, but rather by pus. It is simply a superficial inflammation of the skin, which goes on to suppuration. This refers to typical cases. Of course there are atypical cases where it is not so easy to separate them. He had seen a case of horse-pox in Montreal where regular suppuration took place, with great swelling and tenderness, but this is exceptional. He was not properly acquainted with all the manifestations which "grease" may undergo, nor could he give what he felt to be an adequate history of its course and termination, although he can detect it readily enough when he sees it. "Grease" is a subcutaneous as well as a cutaneous affection, and he doubted whether it has any counterpart in the human being. With regard to horse-pox granting protection against small-pox, this is as yet an unsettled point. In the last few years a good many experiments have been made in this direction, and many of them seemed to declare that it did protect; others have doubted it. Among grooms, twenty or thirty years ago, when horse-pox was more prevalent in the old country, it was believed that it did protect, but this is also a matter which requires to be thoroughly investigated, and a complete series of experiments is urgently required.—*Montreal Medical Journal.*

Hypodermatic Alimentation.—Doctor Caird, in the Edinburgh Medical Journal, reports the case of a man, for three years a sufferer from gastric catarrh, and who had received great relief from washing out his stomach. For five months there had been increasing difficulty in taking solid food and in passing the stomach-tube; finally, only fluids could be taken, and on examination a stricture was found at the cardiac extremity of the œsophagus. Gastrostomy was proposed, but declined on account of great weakness and emaciation,—nearly twenty-five pounds had been lost in weight in two months; the temperature was rather subnormal. But little of the fluids taken by the mouth was retained, the greater part being rejected. Some nourishment was administered by the rectum. In the hope of increasing the strength and securing sufficient improvement to warrant the performance of gastrostomy, the subcutaneous administration of sterilized olive-oil was begun. Intra-muscular injections in the gluteal region caused no discomfort, and for a week the patient received three or four ounces in this manner, experiencing appreciable benefit; so that gastrostomy was undertaken under the local anæsthetic influence of cocaine. The operation was unattended with shock or pain. The stomach was opened with a tenotome, and a catheter introduced for feeding purposes. The patient's temperature rose a couple of degrees after the operation, but he did not improve as had been anticipated, and in six days suddenly collapsed and died. Upon post-mortem examination an annular epitheliomatous stricture at the cardiac extremity of the œsophagus was found. There was also some thickening and ulceration about the pylorus, one of the ulcers having given way into the peritoneum.

Significance of Vaginal Discharges.—A leucorrhœa inodorous or of mild odor persisting during the climacteric, accompanied by increasing hæmorrhage, is suspicious and demands investigation. A leucorrhœa profuse, of peculiarly fœtid odor, grumous, excoriating, appearing early or late during the climacteric, with profuse hæmorrhage, is reasonable evidence of cancer of the cervix. If moderate in amount, ill-smelling (the peculiarly fœtid odor of cancer of the cervix being absent), accompanied by hæmorrhage, cancer of the body of uterus is suggested. With hæmorrhage containing material like the washings of meat, sarcoma is said to be indicated. A watery discharge, as a rule, occurring during menstruation, odorless, or of

little odor, persisting, accompanied by profuse hæmorrhage, indicates fibroid; with little or no hæmorrhage, polypi. Profuse bloody discharges coming on gradually with declining menstruation, ceasing usually with the menstrual flow, point to fibroids. Persistent profuse discharges of blood occurring spontaneously, arising from sudden exercise or coition, occurring as a rule after the menopause, indicate cancer. A gradually increasing amount of menstrual flow is suspicious and needs investigating. Post-climacteric hæmorrhages in a fibroma of the uterus of long standing form one of the principal grounds for the suspicion of sarcoma (Borner). The early recognition of malignant disease is demanded, and possible prevention of the fatal exhaustion which accompanies it by the administration of drugs, and the application of those methods which in a measure may be supposed to offset the terrific drain on the nervous system. Inasmuch as present experience shows that early removal of diseased tissue prolongs life, the importance of early diagnosis and treatment can hardly be overestimated.—*American Practitioner and News.*

Clinical Features of Myxœdema.—Doctor Byron Bramwell, in the Edinburgh Medical Journal, asserts the diagnosis of myxœdema in typical and fully developed cases presents no difficulty. The clinical picture presented is so striking that, once one has viewed a case, it is impossible not to recognize it ever after.

"It is only in the early stages and in imperfectly developed cases that difficulty of diagnosis can occur. In young persons the pink blush on the cheeks, which is such an important feature, may be entirely absent. In the early stages the swelling of the face, and the slowness of thought, speech, and movement, being often much less striking, are apt to pass unnoticed. In the earlier stages, increased susceptibility to cold, a subnormal temperature, dryness of the skin, absence of sweating, fullness of the face, especially of the lower lip, a feeling of lassitude and debility, and repugnance to active exertion, whether of body or mind, are the chief features of importance.

"The prognosis of myxœdema has entirely changed within the last few months. Before the introduction of subcutaneous injection of thyroid, and thyroid feeding, the prognosis was extremely bad; the disease was rightly looked upon as incurable. Now, provided that there are no complications, and the patient is not too old, the prognosis is eminently hopeful. It may, I think, be safely stated that the symptoms of myxœdema may be entirely removed in the course of two or three months by the introduction into the body of thyroid, either in the form of subcutaneous injection, or, better, through the stomach by feeding."

What is the Sweet Bread?—There has always been some diversity of opinion as to what constitutes the sweet bread. The most common mistake has been to apply the term to the testes of the sheep instead of to the pancreas. It appears also that various other glands have been so designated, their situation demonstrating the kind of sweet bread: Thus the pancreas is known as the "heart sweet bread," "belly sweet bread," or "gut sweet bread," and is the article most butchers are likely to supply where sweet bread is asked for; it commands a good price, but its market value is lower than that of the "throat sweet bread," or thymus gland, which is regarded as the *true* and best sweet bread. The parotid gland is called the "cheek" and "ear sweet bread;" while the sublingual glands are termed "tongue sweet breads;" these last are the cheapest, and sometimes sold as the valued dainty "throat bread." In India, however, the testes of the sheep are the only glands of all those mentioned that are used as an article of food, and are regarded rather as a delicacy; these are the "sweet breads" commonly supplied in the East, and also in Dorset and London restaurants.—*British Medical Journal.*

Vaginal Blueness of Pregnancy.—The conclusion seems justified that the blue, violet, or rather lilac-colored change in the appearance of the vaginal mucous membrane begins to develop towards the end of the second month of pregnancy. Individuals differ as to susceptibility. Occasionally a case is noted in which but slight change is perceptible, even as late as the fourth month, while it may appear as early as the fifth week. The vaginal blueness is most markedly developed in the dark negro and blonde Caucasian. In women with thick skins it is more difficult to detect. The color change in the beginning of pregnancy is due to vasomotor changes initiated in the uterus shortly after conception, gradually extending down the vagina, and finally involving the tissues at the outlet. In one case reported the patient was three months pregnant; change in color was marked in the vaginal tissues, but ceased abruptly at the vulva. If the blue be slight, press upon the tissues, quickly remove the finger, and note the return of blood to

the part. Ordinarily, the white spot caused by the pressure of the finger is immediately effaced by the returning current.—Doctor H. A. Slocumb, in *Philadelphia Polyclinic.*

THE GOULD METHOD OF ABLATION OF PENIS.—The scrotum is split, and the incision continued down to the centre of the perineum. The penis is then seized and freed down to the attachments of the corpora cavernosa and to the rami of the pubes; these are divided. The corpus spongiosum is next separated from the corpora cavernosa about an inch from the triangular ligament. The penis is removed, and the corpus spongiosum split and attached to the skin wound behind the scrotum. The long incision through the scrotum is sewn up. The groins are next attacked, and all enlarged glands thoroughly cleared out, the femoral vessels being exposed in the dissection.

Mr. Herbert Allingham is confident this is the best operation to perform, as it clears away all the dorsal lymphatics, and in cancerous affections it is most important to cut free and wide of the morbid growth.

Should there be any recurrence in the groin, Mr. Allingham would ligature the femoral artery and vein, and then thoroughly clear away the whole of Scarpa's triangle, and if necessary turn up the peritoneum and clear away the external iliac glands.

PARÆSTHETIC NEUROSES.—Dr. Jas. Collins, of New York, classifies these neuroses on an ætiological basis:

The emotional type:

The mental:

The neurasthenic:

The toxic:

Walking numbness (?):

A type which might be called an occupation paræsthesia, as it is often associated with certain occupations.

In treatment of occupation paræsthesia, prolonged rest appears to be the most beneficial agent, particularly in conjunction with restorative medicaments. The administration of narcotics and antipyretics, such as the synthetics and the like, is harmful.

Faradic currents, in the shape of a local bath, proved beneficial in some instances where spring waters and mineral acids were not of value. Most beneficial of all was regulation of diet, particularly by limiting the nitrogenous food-stuffs, a quiet outdoor life, change of occupation and habits, and the administration of restoratives.

GONORRHŒA IN LITTLE GIRLS.—Dr. Cassell examined the discharge of pus from the genitals of thirty small girls and found gonococci in twenty-four; the youngest was seven months and the eldest eleven years. In the greater number of cases he was able to trace the infection to other members of the family; he does not favor the idea that all were infected by direct means.

The diagnosis is of importance. In all cases of gonorrhœal vulvo-vaginitis there is free discharge, and thick, creamy, greenish-yellow pus.

Therapeutically, he treats by local and general baths, placing the pelvis high for local injections, for which he employs daily an ear syringe containing 1 to 2000 sublimate solution. If the discharge becomes less profuse, after two or three weeks he uses, two to three times weekly, a 1- to 1½-per-cent. solution of nitrate of silver; these are continued until the cure is established, which usually occurs between two and three months. —*Berliner Klinische Wochenschrift.*

GENERALIZED MELANOTIC CARCINOMA.—Landowski reports a woman, 57 years old, who during life presented upon the skin in various situations small nodules of rapid evolution and of indubitably malignant character, death taking place amid the symptoms of cerebral hæmorrhage. At the post-mortem examination nodules were also found in the pericardium, in the myocardium, in the kidneys, in the thyroid gland, and at the hilum of the lungs. The supra-renal capsules were greatly enlarged; there were small tumors in the mesentery, some of which, situated in the intestinal border, had ulcerated into the bowel; tumors were also found in the course of all of the large vessels; the liver was intensely pigmented. Microscopically the new-growth presented the histologic appearances of melanotic carcinoma. The cerebral hæmorrhage appeared to bear no relation to the carcinomatous diathesis, although the entire brain was dissected with great care.—*Bull. de la Soc. Anat. de Paris.*

DIAGNOSIS OF TYPHOID FEVER.—Dr. V. Filipovich, of Odessa, remarks that in all cases of typhoid fever under his notice during the last two extensive epidemics in Southern Russia, there has been a peculiar induration with yellowish or orange tint in the prominent portion of the plantar and palmar surfaces, instead of the reddish color observed in healthy subjects, or the bluish

tinge in cyanotics. This yellowish appearance is to be accounted for by the enfeebled action of the heart, the incomplete filling of the capillaries, and the dryness of the skin.

The sign is so constant and so well marked that Dr. Filipovich considers it as pathognomonic even in doubtful cases. That it is in no sense peculiar to the epidemics in Southern Russia is vouched for by Dr. Skibnevski, who observed the same in patients suffering from this disease in the vicinity of Moscow.

PARALDEHYD HABIT.—In the Edinburgh Medical Journal is reported the case of a man, aged 65, admitted as a voluntary patient to the Royal Asylum, Edinburgh, Nov. 23d, 1892, who was addicted to inordinate use of paraldehyd. Two years before, he began the use of the drug for the relief of insomnia, from which he had long suffered; and the dose was gradually increased until shortly before he entered the asylum he was taking sixteen ounces per week. He had lost twenty-eight pounds in weight, and was so feeble he required to be fed like a child. The action of the heart was weak and irregular, the appetite abnormally large; and he likewise suffered from hallucinations of sight and hearing, and from delusions of unpleasant character. He proved a most troublesome patient, but was finally discharged, in good health, on the 21st of February of the current year.

FOOD VALUES.—

Nourishment.	Energy.
1. Corn meal.	1. Corn meal.
2. Wheat flour.	2. Wheat flour.
3. Oatmeal.	3. Oatmeal.
4. Salt cod.	4. Sugar.
5. Beef (neck).	5. Potatoes.
6. Cheese.	6. Salt pork.
7. Potatoes.	7. Wheat bread.
8. Wheat bread.	8. Cheese.
9. Chicken.	9. Butter.
10. Milk.	10. Beef (neck).
11. Eggs.	11. Milk.
12. Sirloin.	12. Sirloin.
13. Mutton.	13. Salt cod.
14. Salmon.	14. Mutton.
15. Oysters.	15. Eggs.
16. Salt pork.	16. Chicken.
	17. Salmon.
	18. Oysters.

—W. O. Atwater, in *The Forum.*

PRECOCIOUS MENSTRUATION.—Jacobvitch (Nouvelle Archives d' Obstetrics et de Gynecologie) related a case of menstruation in a child but six years of age and which he also presented before the St. Petersburg Society for Diseases of Children. She was first seen at the age of three; was brought to Jacobvitch for hæmorrhages. The genitals were normal. A considerable amount of a milky fluid exuded from the breasts, which were of the size of hen's eggs. She menstruates several times yearly, especially in summer; the period lasting from three to four days. Before the catamenia the child becomes ill-tempered; afterward has headaches with vertigo. She is very anæmic. The labia minora and clitoris are slightly hypertrophied.

RELATIONS BETWEEN THE UTERUS AND THE EYE.—Certain ocular troubles exist in relation with different physiological and pathological conditions of the uterus:

In order to institute an efficacious treatment it is important to establish their origin:

These ocular lesions are much more tenacious when the uterine troubles have persisted for a long time:

In a large share of cases they are attributable to infection:

The treatment should be addressed to the local condition of the uterus and the vagina, to the local state of the eye, and to the general condition of the patient.—*Medical Times.*

PERMANGANATE OF POTASH.—Permanganate of potash as a disinfectant or deodorant has stood the test of giving better results than any other local application. One drachm of the drug to a pint of water is the best wet dressing for wounds and ulcers when there is too rapid formation of pus; it is a certain remedy in fetid, ichorous, or otherwise unhealthy discharges; an excellent application in erysipelas; and gives very satisfactory results as a wash in abscess cavities after pus has been discharged. As an application to balanitis it is curative, and as an injection in gonorrhœa it is one of the best. —*American Medical Journal.*

REUNION OF SEVERED FINGERS.—Finney sutured in place the ends of the ring and middle fingers seven hours after they had been cut off by a machine. Firm union took place within two weeks. When seen, at the end of three years, motion and sensation were complete. Antiseptics were avoided because they form a thin layer of coagulation-necrosis, which might interfere with union.—*Johns Hopkins Bulletin.*

The Medical Age.

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Original Articles.

WHAT SHALL WE DO FOR OUR TYPHOID FEVER PATIENTS?*

BY JAMES SAMSON, M.D.

As an excuse for presenting this very brief paper, I have to submit, first, that the subject is always one of importance at this season of the year, and second, that I have never had an opportunity of hearing the question discussed by as representative a class of practitioners as the members of the Detroit Medical and Library Association. So long as the latest published statistics report 2,530 cases of typhoid with 402 deaths in a year in about three-fourths of the State of Michigan, so long will this melancholy question be rich in professional interest. I have chosen such a name for the paper as will dispose of all chance for any speculative theories entering the discussion as to the origin of the disease and the history of the germ proper to it, with the modes of its primary operations.

I have simply propounded the inquiry: What shall be done with the patient whose symptoms are those of typhoid fever? Well, by all odds the most important thing to do for him is to rediagnose his case, to make it as nearly absolutely certain as possible that his disease *is* the one suspected; and I would emphasize the statement that the wonderfully decreased mortality-rate in enteric fever would be still considerably lessened if the suggestion I have now made were never forgotten but always most systematically observed. It is so easy, especially at certain seasons of the year, to suspect the typhoid contagion, and so very easy to be mistaken, that the physician's first visit is one of intense interest to his patient, especially with the possibility of something being done now that cannot again be undone. And, too, how often is something else diagnosed and the true virus overlooked, to the detriment and danger of its victim. In twenty years of practice I have seen too many cases of meningitis treated for typhoid fever and hurried to their fate by the mistake, and I know that I have seen more than one case of miliary tubercle carried through weeks of typhoid treatment and left to die with what bereaved friends still suppose was the sequela of a disease that never existed. A deeply seated abdominal abscess has often been named typhoid till the inevitable symptoms began to call out too loudly; and I have seen one stubborn case of continued fever that was really pus in a pleural cavity. We all, I suspect, have seen typhoid patients that were being steadily poisoned with quinine, and so-called typhoid patients that were well-nigh dying for want of it.

Believing as I do that quinine is always injurious to a typhoid patient, it is, I repeat, very important that enteric fever should never be treated as malarial disease—and the distinction, though sometimes difficult, can always or almost always be made pretty positively quite early in the case. The best possible treatment for malarial fever is about the worst possible for typhoid, and the best possible treatment for typhoid is absolutely useless in malaria. It is never necessary, I believe, to diagnose between typhoid and typho-malarial fevers. *There is no such disease as typho-malarial fever!* But if I am mistaken in this conclusion, and if it be true that the united effect of these two poisons in the same body will result in so mitigating the influence of either poison as to produce a less deadly attack than would either of them alone, then there is surely one law in nature differing from all others.

So thoroughly am I assured from my own observations and experience that about the most common error made in the profession is in the diagnosis of typhoid fever, that I would suggest that, except in an epidemic of the

*Read before the Detroit Medical and Library Association.

disease, every single case should be accepted with great mistrust. If the patient be quite young and the case solitary, suspect meningitis always, or an exanthematous antecedent history. If quite old, remember a great practitioner's advice, given many years ago, to never have a consulting physician see your typhoid patient till you know for certain the condition of the kidneys. If the patient is a young woman, be especially certain it is not a case of miliary tubercle, and this, it is said, is exceedingly hard to know. And as a final reminder in this direction I may add that persistent inquiry, in a very large percentage of cases, will point out the probable source of contagion and furnish a very strong corroboration.

Having assured myself that a case is indeed one of typhoid fever, I have for many years treated it with the least possible medicine, the least possible food, the least possible exertion, and the least possible excess of fever. I have divided my patients in a general way into two principal classes—one including young men and boys from sixteen to twenty-five years, and strong, robust young women of the same age, as those most likely to be of a serious type; and a second class including all others. In this first class I have found the symptoms grow more rapidly urgent than at other ages; in them the fever rises higher and sooner, and the wild delirium that means so much in them comes earlier. In this class especially is there apt to be that condition of the bowels that always forebodes trouble, and I have for a long time put all such cases on small doses of calomel, continued until the character of the evacuation is entirely changed, and from that time have been indifferent as to whether another single dose of medicine was administered. I have adopted the same treatment in all cases where there were dark or greenish or frequent stools, and never follow the calomel with a cathartic of any kind. I have put the patient to bed, to not again leave it for a minute till a week after the last vestige of fever, and have never yet lifted a single patient out of bed into a cold bath. I have tried to be always certain that the temperature should not exceed 102° or 102.5°, and I have doubted whether a temperature less than this needs to be much interfered with. I have during the past six years given not a single dose of antipyrin, antifebrin, or phenacetin to any typhoid patient, and shall always feel that my own experience has been such as to contra-indicate the use of these remedies in this particular disease at any stage or in any dose. I am sure their use has to be paid for in the days of convalescence, when a feeble heart has to make such a struggle. I have depended on cold sponging and cool surroundings entirely for my control of the temperature, and believe I have always found them sufficient. I have no desire to disapprove of the now famous Brandt system: It has been marvelously successful when diligently used, but it is difficult of application in general practice and interferes very much with the principle of constant quiet; for house-to-house treatment I shall not adopt it till more thoroughly convinced of its particular advantage, and until an easier mode of its application has been devised. To produce sleep I have depended chiefly on the cold sponge and have ceased using the bromides. I have not given the smallest dose of opium in any form, or chloral hydrate, in years, and feel now that I never expect to give them again. A few times I have resorted to sulphonal, and a very few only. I have given all patients small doses of nitro-muriatic acid largely diluted—first, because it seemed in the right direction, and again, because it is perhaps well to give all patients something. I have not seen a case of tympanitic abdomen or persistent looseness of the bowels in many years, and have not had a case of intestinal hæmorrhage since 1880; and these facts I attribute to absolute quiet and incessant vigilance in the matter of diet. A careful investigation has convinced me that a large majority of physicians recommend about twice the quantity of food I allow my patients, and I, of course, am inclined to insist that they all are wrong. So great a man as DaCosta gives three pints of milk and a pint of broth a day, and arrow-root at midday, and very many practitioners follow close on the same line. My own instructions are that the patient shall have milk, and milk only—three half-pints a day, and never to exceed a quart. From this rule I never depart till a morning tempera-

ture has been normal; and to this, and this alone, do I attribute the remarkable exemption from bowel trouble and ulcerative disaster that I have experienced.

Three or four years ago a long and very interesting article appeared in one of the leading journals giving the record, treatment, diet, and mortality-rate of this disease in the hospitals of Philadelphia, New York, and Montreal, and I convinced myself, in reading it, that the diet was excessive in them all, and that the bowel complications and death-rate were in proportion to this excess, and probably attributable to it more than to any special features of remedial treatment. Why should a patient have an atom more of food in such a disease than will barely help him live through it; and why should not everything possible be kept out of the alimentary canal? In the earlier years of my experience in treating this disease, I always carried with me a mixture of extract of coto-bark rubbed up in mucilage (because it is of little effect in any other form), and depended on it, almost without disappointment, in every relaxation of the bowels. The bismuth I usually added to it may have been of some avail, though I often doubted if it was. A stricter discipline as to diet in latter years has given me very much less occasion to use either of them.

Perhaps the greatest triumphs in the management of severe forms of typhoid fever are those achieved toward the far-off end of the disease, when a very feeble and rapidly failing heart, that may not even have been poisoned by antipyretics, warns us how close a place the patient has to pass through yet to escape. I need not repeat to you that it is now that stimulants, and nux vomica, and quiet, and no mistakes, can come so nearly performing a miracle. It is now that you can single-handedly fight away the grim monster, if only the bowels are not harassing the victim. There are those practitioners, and there are very many of them, who give stimulants long before the heart fails; but I desire to express a strong doubt as to the wisdom of the method. The human system longs for alcohol as it does for nothing else when the proper time has come, and utilizes its every element; but I offer it as a demonstration of this law, that whenever the physician can discover the odor of alcohol in the breath of his patient, no matter what the disease or what its stage, he may safely accept it as a reminder that the prescribing of it was a mistake.

I need not say that once a normal temperature has been touched, nutritious fluids may be gently added to the patient's diet; nor need I say how long he should still lie absolutely quiet, except to add that I have never seen but a single case of relapse of the fever that was not certainly due to exertion or excess of food, and I have but little faith in calling any condition a true recurrence of the original disease.

I have said nothing of all the other complications that may come all along the way, nor need I allude again to the horrors of the discovery about this time that the case never was one of enteric disease. All these are emergencies in which the skillful and *cunning* practitioner knows what best to do. And then come all the sequelæ, which will, I believe, be serious or numerous, or absolutely wanting, in exact proportion, or well-nigh exact proportion, to the wisdom and caution with which the case has been managed from the onset of the disease.

In conclusion I may add that this paper has been written that I may learn some useful lesson from its discussion, and that I may have an opportunity after much experience of emphasizing as strongly as words may do it, my strong conviction that errors in diet are the most common and the most deadly in the management of enteric fever. If I should to-morrow suspect myself the victim of the typhoid contagion, I would select my surroundings and my nurse with all speed and the utmost care, and go at once to bed. I would send for a physician who I felt sure was strong in general practice more particularly than in this one disease. I would ask him to look most carefully for those three or four symytoms that may almost always be found, and by exclusion to eliminate every other possible condition and, unless my case was likely to be an unusually mild one, would suggest his prescribing small doses of calomel for two or three or four or six days, according to the severity of the onslaught, and that not another dose of medicine be given me till I was well again. I would beg his promise that nothing but desperation would tempt

him to give me a single dose of any antipyretic or opiate. I would secure his promise to see me every day in his careful lookout for complications, and to resort to stimulants with a free hand when he knew the time had come. I would ask my nurse for from twenty-four to thirty ounces a day of milk and enough of clear cold water, and would warn her that my temperature must never remain at 103°; I would remind her how often a tepid sponging will make a restless patient sleep. And then I would lie down with a strong confidence that there were a good deal more than ninety chances in a hundred, that on the morning of the twenty-sixth or twenty-seventh or twenty-eighth day my temperature would again be normal and all be well.

Windsor, Ontario.

TREATMENT OF ACUTE PNEUMONIA.*

BY THOMAS J. MAYS, A.M., M.D.

Acute pneumonia is a disease the symptoms and physical signs and course and duration of which are constant and characteristic; yet, strange to say, its treatment is as variable and vacillating as its death-roll is long and appalling. In the city of Philadelphia alone fifteen hundred lives are annually sacrificed to this disease. Is this frightful mortality inevitable, or is there a way to escape it? I believe that it can be materially lessened, but before this can be done we must realize the shortcomings and the mischievous tendencies of professional thought on this subject at the present day. I believe that the want of uniformity in the therapeutics of this disease is partly traceable to the prevailing but mistaken theory that pneumonia, like measles and smallpox, is a self limited disease, and therefore beyond the touch of successful active medication. Then again, the general skepticism of this age has invaded the field of therapeutics and cast a gloom of doubt on the remedial effects of the long-honored articles of our materia medica. Both of these tendencies, in connection with the fact which has been shown over and over again that the practical results of the let-alone treatment of pneumonia are superior to those obtained when the disease receives the active routine treatment of days gone by, have brought the therapeutic art into undeserved discredit, and sown broadcast a belief that the less active the treatment the better it is for the patient. In accordance with this view it is held the disease must pursue a natural course, and all that can be done is to stand by and watch and treat any incidental danger which may develop.

What ground is there, then, for believing that the pneumonic process is self-limited, and that the therapeutic art is powerless in making a local impression on it? So far as I can see, there is no more reason for regarding the disease as self-limited than for considering any other ordinary acute disease in the same light. All maladies of this kind are limited in duration, but there is no inherent limitation in the same sense as there is in smallpox or measles. Let us say pneumonia suddenly attacks a single lobe of a lung, and in the course of three or four days it suddenly ends in crisis, and every vestige of the disease disappears. Its sudden onset and termination in many instances lead us to infer that it is due to the absorption and explosion of a specific poison which exhausts its energy in a few days, and to see an analogy between its behavior and that of smallpox. On the other hand let us suppose another case of pneumonia involving the same lobe of the lung: In about three days the temperature suddenly drops to within a degree of the normal line, and a favorable termination is anxiously looked for, but instead the temperature rises higher, and on physical examination it is now found that the whole of the adjoining lobe is implicated in the process. A similar succession of events may take place in case another lobe or part of a lobe becomes involved. These phenomena are familiar to every practitioner, and yet can anyone say that this is definite proof of the self-limitation of pneumonia? Has anyone ever heard of smallpox or measles attacking the body by piecemeal, first invading one area, then another, and so on? Is it not more probable that the duration of the pneumonic process is chiefly governed by the length of time which it natur-

*Read before the Philadelphia County Medical Society.

ally takes for the fibrinous exudation to undergo fatty degeneration, and that when the fibrinous deposit occurs successively in different lung areas the disease will be more protracted on this account than if it confines itself to the area which became primarily involved?

Moreover, it is my firm conviction that the prevailing impression that the pneumonic process cannot be controlled or restrained by means of active medication, rests on an equally insecure foundation. I am not rash enough, however, to assume that any form of treatment can be devised which will always insure against death from pneumonia, but from recent experience I believe that a mortality of twenty per cent., which is the usual death-rate, is too high, and that this may be materially reduced. I also firmly believe that this reduction in the mortality cannot be brought about exclusively through internal medication, feeding, or stimulation, valuable as these measures are. The profession fully realizes the vital importance of sustaining the strength of the patient throughout this disease, and practically this part of the treatment is carried out with very desirable results. Far above the efficacy of all these measures, however, stands ice, or ice-cold water, the local application of which has the undoubted power of subduing and circumventing the inflammatory process in the lung.

I base this favorable opinion on the results which were brought out in my collective report on "Ice in the Treatment of Acute Pneumonia," which was published in the Medical News of June 24th, 1893. This paper embodies the condensed histories of fifty cases which were treated locally with ice or cold applications, and reported to me by professional friends, collected from the literature of the subject, or from personal observation. Out of the entire number, two died, making a death-rate of four per cent. Additionally I refer to one hundred and six other cases of pneumonia treated in the same way by Dr. Fieandt, a physician of Finland, who had a mortality only of 2.82 per cent.—giving us a death-rate among all of these cases of 3.2 per cent. Moreover, since the appearance of my paper I have succeeded in securing a number of other reports of cases thus treated, which continue to maintain the favorable impression made by the ice treatment in the first report, and which I hope to include in a future contribution on this interesting problem.

Aside from the fact that both of the cases which died among those reported in my list were suffering from probable incurable diseases when they were smitten with pneumonia, and were, perhaps, on this account not the most impartial test for any new remedy, it is quite evident that the total showing is still better than appears on the surface. Great weight must, I think, be laid on the fact that these cases emanate from fourteen independent observers, half of which number report only one case each. This excludes largely the existence of a personal factor—an attribute and a power which grows out of accumulated knowledge and experience and gives its possessor a certain advantage over those less equipped in this direction,—and goes far to demonstrate that the curative effects of ice applications do not depend on any very special artistic skill of the medical attendant.

I am often asked whether ice is as efficacious in catarrhal as it is in croupous pneumonia. On theoretic grounds one would be led to believe that it is of greater service in the latter than in the former, because the whole inflammatory process is more ephemeral and entails less organic change on the lungs in that form. While my first cases in which the ice was used were exclusively those of the croupous variety, my later experience has taught me that this measure has a similar beneficial effect in catarrhal pneumonia, provided it is pursuing an acute course. This is fully demonstrated by a number of the cases contained in my report, notably by some treated by Dr. Lees, and also by one reported by Dr. Franklin. Indeed, I believe it is impossible sometimes to discriminate between croupous and catarrhal pneumonia during life when the latter pursues an acute course, and especially when it takes place in infants or small children.

In what special manner should the ice be employed? For want of a better method, the front, side, and back of the affected area are surrounded with rubber bags filled with ice and wrapped in towels. The number of bags

which are needed depends on the size of the area which is involved. If this is small, only one or two bags are necessary, but in cases where an extensive area is affected I have applied as many as six and seven, which suffice to cover the whole chest. They are allowed to remain until the temperature becomes nearly normal. Very often it is found that the application of the ice to an affected spot is immediately followed by a marked lowering of the temperature, and improvement in the physical signs in the part. In a very short time, and perhaps in the midst of this amelioration, the temperature rises again, and the patient feels less comfortable than before. Further examination shows that the disease has invaded a new and probably an adjoining territory. Removal of the ice-bags to the fresh spot, or the application of new ones, will again be followed by improvement. This creeping feature of pneumonia must always be borne in mind, and followed up until it ceases.

One difficulty in the use of the ice-bags is to keep them constantly applied to the chest in restless patients, and this has led me to look into the feasibility of making a hollow tin jacket, which adapts itself to the chest, and through which a constant current of ice-cold water may be passed. Such an apparatus I have in contemplation, and when it is perfected I think it will add much to the effectiveness of the application, and will also be a greater convenience to the patient.

The subject of diet demands the most serious consideration of the practitioner, whose aim should be to administer food of the most nourishing character and in the most concentrated and digestible form. In other words, he should strive to give the stomach as little work to do as possible, and at the same time maintain the nutrition of the patient at the highest point. For this reason two ounces of fresh beef-juice, pressed out of round steak, should be given alternately every hour and a half or two hours, with eight tablespoonsful of milk, one of whiskey, and one of lime-water. Beef-powder, and nutrient wine of beef-peptone, may also be given.

So far as internal medication is concerned, I would say that strychnine stands first in this respect and should be given unstintedly. Adults should receive $\frac{1}{25}$ or $\frac{1}{20}$ grain, twice a day, hypodermatically, and $\frac{1}{25}$ grain by the mouth every four hours, until there is a manifestation of toxic symptoms, such as an increase of the reflexes, especially of the lower extremities. A quarter of a grain of morphine is to be given subcutaneously in the evening to produce sleep. An ice-bag to the head will also help to allay cerebral excitability and restore quiet. Evacuation of the bowels should be secured by the administration of small doses of calomel and sodium bicarbonate.

When cyanosis and difficult respiration become very marked, inhalations of oxygen must be employed. The patient may inhale the gas out of an ordinary-sized rubber gas-bag through a suitable mouth-piece which is attached to it. The amount of oxygen which must be given in a case is entirely dependent on the severity of the symptoms, but it is a good rule to push it until the lips and finger-nails assume a more healthy appearance and the breathing becomes less oppressed, and to give it as often as it is necessary to suppress these symptoms.

Now when we compare the results of the ice treatment of pneumonia with those which are obtained from the prevailing treatment, it will show very much in favor of the former mode of treatment. Thus the mortality of 1,012 cases in the Montreal General Hospital was 20 per cent.; while in the Charity Hospital, of New Orleans, it was 20.01 per cent. From 1822 to 1889 the mortality from pneumonia in the Massachusetts General Hospital was 25 per cent. Dr. Hartshorne estimates that the death-rate from this disease in the Pennsylvania Hospital, this city, was about 31 per cent. during the years of 1884, 1885, and 1886. A comparison of this mortality-rate with that which has been derived from the treatment advocated in the present paper, shows that the latter produces results which are at least 75 per cent. better than those which are obtained when the cold applications are not employed. I know that the number of my cases is rather small to draw such promising deductions, but from my experience since they were published I am encouraged to believe that this form of treatment will not only maintain its excellent reputation, but will grow in increased favor on closer acquaintance.

Philadelphia, Pa.

WHAT THE NEWER THERAPEUTIC PROCEDURES HAVE DONE FOR NEUROLOGY.*

BY WILLIAM C. KRAUSS, M.D.

The epoch in which we live may well be called the sky-rocket period of the Nineteenth century. Men, like methods, approach their zenith with an increasing roar and sparkling brilliancy, and as suddenly fade, to fall with dull and heavy thud. What was yesterday a seemingly brilliant success becomes to-day a glittering failure, and the shores of time are laden with the wrecks of "wonderful discoveries." Hypnotism, suspension, and the method of Brown-Séquard have each enjoyed their sky-rocket experience, and the impressions which they left after spending their force is what I shall attempt to elucidate in this paper.

The first reports of the method of Brown-Séquard read like a fairy tale, and the "Elixir of Life," so-called, seemed to be the magic fluid that philosophers had vainly sought for during centuries. No doubt Brown-Séquard was perfectly honest in the thought that he had invented a method unsurpassed and hitherto undiscovered, but on searching the alcoves of the National Library of Paris several brochures have been found, written by Dr. Mizauld, which contain much of interest if not of actual worth. This physician lived in Paris in the Sixteenth century, and the following passage must certainly establish for him a certain right to priority in favor of a method which, sleeping for more than three hundred years, was reawakened by Brown-Séquard:

"If the genital organs of a red bull be bruised in a mortar and taken by a woman in some wine or soup, it will give her a disgust for love, while, to the contrary, the same beverage taken by a debilitated man will reawaken his amorous desires."

Certainly nothing more explicit was said in the famous communication to the Société de Biologie of Paris, of June 1st, 1889.

It seems that Brown-Séquard had been at work on this project for many years, for in 1869 he expressed a belief if it were possible to inject spermatic fluid into the veins of old men, they would experience a rejuvenation—sexually, mentally, and physically. After repeated experiments upon rabbits, dogs, and guinea-pigs, in a true scientific spirit he injected some of the testicular fluid into his system, and his experiences and results form the most interesting part of his memorable communication:

"The author of this communication, now 72 years old, has for the past twelve years watched his physical powers slowly and continually decline. The laboratory work has become laborious and heavy, and after each meal I have been obliged to take a short nap. After the third injection a complete change took place. The work in the laboratory has become agreeable, not the least fatiguing, and after three and a half hours of such work I have been able to edit a memoir. The dynamometer showed an increase of 6.7 kilogrammes; the bowels regained their former activity; and, in short, I have regained all that I have lost."

For some time the most enthusiastic reports were received, especially from Hammond, Loomis, and Brainerd in this country, D'Arsonval, Villeneuve, Mairet, Gley, Hirschberg, and Egasse in France; Marro, Rivano, Ventro, Copriati, and Mosso in Italy; Owspenski in Russia, and a host of other observers, each one eager to "land his results on the ground floor." The diseases treated were general debility, locomotor ataxia, insanity, impotence, cholera, tuberculosis, cardiac weakness, nervous dyspepsia, lumbago, hemiplegia, myalgia, neurasthenia, etc. All of these affections were apparently cured or else greatly benefited by injections of testicular juice, that is, in 1889 and 1890.

Gradually the reports became less numerous and less encouraging, save those which came from the master himself and some of his former pupils. Perhaps the greatest check to this movement was the fact that Charcot and his pupils refrained from using these injections, or, at least, never gave it their sanction. Negel, of Jassy, France, has recently reported his experience with this fluid, and in a large number of varied affections of the nervous system treated, failed to obtain any results whatever. Pulawski, of Warsaw, Poland, made a series of experiments upon twelve cases, and came to the following conclusions:

* Read before the Buffalo Academy of Medicine, October 10th, 1893.

"Local pain and abscess formation; fever with chills; no specific action; subjective and positive amelioration were dependent upon suggestion."

Copriati studied the effect of testicular juice in four cases of insanity, and found it had no dynamogenic influence on the nerve centres, being limited to temporary stimulation of the nervous system. The unkindest cut of all was the report of Féré, one of the ablest of French neurologists, who, at the request of D'Arsonval, gave the method a thorough trial at the Bicêtre hospital; and in his communication to the Société de Biologie, just four years after Brown-Séquard's, he in unmistakable language disapproved of the method, and cited nine cases in which absolutely no results were obtained. Ovarian juice has, according to Brown-Séquard, given results similar though less marked than those of testicular fluid.

Spermin is a derivative of Brown-Séquard's testicular juice, and its action seems to be similar. It is claimed to act upon the motor areas of the cerebro-spinal axis, increasing strength of arms and legs, regulating sexual, urinary, and digestive functions, and improving general sensibility.

Brown-Séquard's method to-day is not used by neurologists either in America or Europe, but is still being experimented with by its champion and his pupils, apparently with good results in a certain class of *functional* nervous diseases.

Following closely upon this method of treatment, Gley decided to inject the juice of thyroid glands in dogs deprived of these organs, and, found, instead of dying, they recovered without serious difficulties. In the human family it has been found after removal of the thyroid gland through disease, that a certain train of symptoms will develop, which have received the name of myxœdema, a disease characterized by swelling of the face, body, and extremities, loss of hair, subnormal temperature, etc. Horsley attempted to transplant the thyroid gland of animals to these patients, and met with partial success. Murray, of Newcastle, then injected hypodermatically a glycerin extract, his efforts being rewarded with beneficial results. Brown-Séquard and D'Asronval were conducting similar experiments about the same with equally good success. It was found, however, that the injection of this substance was followed in many cases by pain, inflammation, and abscess formation. To overcome these hindrances, Fox and Mackenzie advised treatment of myxœdema by feeding with sheep's thyroid, and the results seem to be every way satisfactory.

The writer, with experience in two cases of myxœdema, has been unable to attain anything like the results claimed by the English and French writers. In fact, his experience has been negative, and not even obtaining temporary improvement.

MacAlister, of England, has treated cases of pseudo-hypertrophic paralysis with injections of thymus gland extract; also a case of lymphadenoma with a mixture of red and yellow marrow, with seemingly good results.

Dieulafoy, of Paris, has injected extracts of the cortical portion of the kidney into patients suffering with Bright's disease. He proposes the name Nephrine for this particular fluid.

Comby and Dieulafoy have also injected an extract of pancreas in cases of diabetes, with temporary good results.

Following the footsteps of Constantin Paul, of Paris, an American experimenter has injected a large list of specific agents into our *vis medicatrix*. *Cerebrine*, *medulline*, *cardine*, *ovarine*, *testine*, *musculine*, etc., are the newly-coined words which describe these preparations. I need not repeat what has been claimed for these; their virtues and efficacy have been extolled by being published in nearly every medical journal of America.

I have tried to give *cerebrine* a good, fair trial, have used it in two cases of locomotor ataxia, two of epilepsy, two of neurasthenia, and one of general debility; but not one reported improvement; not even did a reaction set in.—The only visible effect was the disappearance of the patients.

Doctor G. Archie Stockwell, in an interesting paper published in the Medical News, August 26th, 1893, described his experience with two rival cerebrines, and a mixture of borax, glycerin and water, and arrived at the conclusion that "the three preparations are equally efficacious, or rather equally inert for good or evil." Negel, of Jassy, also experimented with cerebrine without any ap-

preciable results. Negative results, when reported, have a greater significance than the positive, because many observers are unwilling to parade their failures in the medical press; besides, many editors are averse to publishing articles detrimental to their advertisers.

My conclusions, then, in regard to the "animal extracts," are: That since recent experiments fail to corroborate the results obtained immediately after the introduction of Brown-Séquard's method, the whole matter must be left open for further investigation: That many of the results obtained were due to "suggestion" and "auto-suggestion," and that no specific action has been discovered.

In regard to the treatment of myxœdema, although my results were negative, I believe there is some virtue in the various methods of introducing thyroid glands into these patients, but the disease must be of recent standing and the patient not advanced in years.

As to the injection of the *i-n-e* compounds, I believe that it is all ROT! I cannot be convinced that injections of musculine will cure an atrophied muscle due to destruction of the ganglion cells of the ventral horns of the spinal cord; that medulline will cure a sclerosed cord; or that cerebrine will cure apoplexy cerebralis, perhaps the most commom form of brain disease.

Just recently there has appeared a work by Chèron, of Paris, who writes pointedly on this subject. He says:

"All liquids, when introduced under the skin, produce identical effects, provided they are not toxic and have no specific toxic action. They increase arterial tension, and, in the diseases in which these fluids have been used, a degree of hyper-tension has existed, which being relieved by injections, temporary results have followed."

Raymond, a pupil of Charcot, while studying the Russian University system in 1888, discovered Motchouskowski, of Odessa, suspending his cases of locomotor ataxia with beneficial results. Motchouskowski had himself discovered this method by accident in 1883, and, although published at that time, it had been entirely unheeded and forgotten. It was found that the lancinating pains, vesical and sexual disorders, eye symptoms, and ataxic gait would yield when all other remedies failed. On returning to Paris, this method was tried secretly by the *internes* at the Salpêtrière, and, after obtaining satisfactory results, was divulged to Charcot, who at once instituted a thorough trial. I had the pleasure of being in Paris at this time, and saw and examined many of the patients thus treated. New treatment gives new results, and many of the old stagers declared they were much improved and getting well. Charcot never claimed that suspension would cure locomotor ataxia, or any other organic disease of the cord, but this report gained ground, though the method soon fell into disrepute. All that was claimed was that it would relieve some of the terrible symptoms; and now, five years after its re-introduction to the profession, let us see what is still claimed for it.

Von Bechterew, perhaps the foremost Russian neurologist, says in Neurologisches Centralblatt, Sept. 15th, 1893:

"The suspension treatment has continued to exert a favorable influence on all cases thus far treated; particularly beneficial has it been in locomotor ataxia, spinal syphilis, transverse and central myelitis, compression myelitis, and compression of the spine. In some of these cases it has produced seemingly permanent good results, as nearly a year has elapsed and the patients still enjoy good health."

In the same journal, April 1st, 1893, he recounts the favorable influence it has upon the optic nerve in spinal-cord affections. Prymon has had similar good results in locomotor ataxia and myelitis. Benedikt, of Vienna, another leader of neurological thought, in a number of severe cases of tabes had apparently astonishing results: Patients who were quite powerless to walk or stand were enabled to take long promenades with, and sometimes without, a cane; neuralgic attacks seemed to be more often influenced by this method than any other train of symptoms.

Bonjour, of Zurich, in treating eighteen cases, thirteen of which were locomotor ataxia, obtained excellent results in the alleviation of some of the symptoms in every case. Duncan, of Glasgow, recently reported a case of locomotor ataxia with considerable

improvement. Bogroff, of Paris, likewise reports success. Gray, in a recent work on nervous diseases, adds:

"Suspension, indeed, is a new fad that has certainly effected a temporary improvement in all the symptoms of some cases, often to a wonderful degree. Thus, in one case of my own, in the last stages of the disease, this remedy was tried as a last resort, and, incredible as it may seem, the patient, after two suspensions, got out of bed, which he had not left for weeks, and walked down several flights of stairs."

Other favorable results have been obtained by Rumpf of Marburg, Althaus of London, Mendel of Berlin, and a host of others high in neurological circles. Hirt, in his admirable text-book, recently translated into English, has had a somewhat monotonous experience: He treated 114 cases of locomotor ataxia (eighty-nine men and twenty-five women) by suspension, yet—

"In no single instance," says he, "was I able to note any marked or lasting improvement, and in no case was either the general condition of the patient or the course of the disease influenced for the better; nay, even in the individual symptoms, no decided improvement could be perceived."

This experience is rather surprising, because, coming from an observer so keen, he certainly would have detected results had they been forthcoming.

My own experience has been very satisfactory, partly because I did not expect to see cases cured in a few days, and partly because I would advocate this mode of treatment only as a last resort, and was content with any relief, however slight. I treated three cases of locomotor ataxia, two of hemiplegia, three of railway spine, two of neurasthenia, and one of multiple sclerosis of the cord. One case of locomotor ataxia, a prominent business man in this city, came to me with all the characteristic symptoms of this disease, such as Romberg's, Westphal's, and Argyll-Robertson's symptoms, ptosis, strabismus, lancinating pains, ataxic gait, vesical and sexual disorders, stomach crises, etc.—surely a typical case of tabes. He was given suspension three times weekly, and spinal galvanism; and after five months I found the tabetic symptoms had all disappeared, save the myosis. Even the tendon reflexes had returned, though not to their normal intensity. To-day he is at his work, thoroughly convinced that he has been cured of locomotor ataxia. Occasionally he comes to be suspended, and on each occasion I find his condition improving. I would not dare claim he has been cured or permanently benefited, because I cannot believe that a spinal cord once sclerosed can be cleared up, any more than a hobnailed liver can be repaired. The other two cases of ataxia were temporaily benefited, especially the gait and pains. One case of hemiplegia recovered splendidly, surprising even herself; the other case died before results were attained. The case of multiple sclerosis grew worse, if anything, while the cases of railway spine and neurasthenia did well and, supplemented by other treatment, recovered.

From all these reports, with the exception of Hirt's, we are justified in saying that suspension has done all that was promised for it —sometimes more. When we consider how exasperating are some of the symptoms of locomotor ataxia, the least palliation afforded should be gladly embraced and thanks returned. I doubt whether suspension will ever disappear entirely as a therapeutic procedure in the treatment of spinal-cord diseases.

Hypnotism, or "suggestion," is another method which at different times has claimed the attention of experimentors, but not until recently as a therapeutic agent. The "animal magnetism" of Mesmer, "hypnotism" of Braid, and "suggestion" of Charcot constitute a brief history of the development of this strange phenomenon. Each of these did much to unravel the mysteries surrounding this agent, but to Charcot must be credited the giving to it a certain respectability. Liebault, Liègois, and Bernheim must be commended for their zeal and interest, but Luys has plainly carried it beyond the limit of science and truth. Time will not permit of discussion of the various stages, the different methods, or the points of difference between the Charcot and Nancy schools; I may only indicate its applicability and the results to be expected. I need not recall the wonderful results obtained by observers, the world over, during the years 1886–1890; how long-standing chronic diseases of the

brain and cord disappeared like dew before the sun, or how in it was found a panacea for all human ills. These much-desired qualities were, however, of very short duration, for when crucial tests were applied hypnotism or "suggestion" quickly found its proper sphere.

Hypnotic suggestibility depends first upon the presence of extreme instability of the cellular nervous elements, and, second, upon a weak power of inhibition or control of the activity of these elements. Persons of a low order of intellect are not favorable subjects for hypnosis; neither are persons of a strong individuality, nor the insane. The class most favorable are the hysterical, because they can be easily hypnotized, and because the disease requires a treatment which appeals directly to the perverted action of the cerebral centres. It surely is not indicated for exhibition purposes, or for the treatment of any nervous disease or state unless all other remedies have been exhausted; even in hysteria this holds equally true. Binswanger, of Jena, in reviewing the literature of hypnotism, finds the best results were obtained in hysterical insanity, but in a number of cases of melancholia and in chronic alcoholism hypnotic suggestion had marked success. Berillon, in treating 300 cases, one-third of which were hysterical, had good results in almost all. Collins of New York, Dujardin-Beaumetz of Paris, and many others, have had good results in hysterical conditions, and uphold the Charcot doctrine. Almost every functional nervous disorder, and many of the organic diseases of the nervous system, have been benefited. My cases were all of hysteria, generally of the dull phlegmatic temperament. Neurasthenia and the excited states are rarely benefited. I agree with Berillon that hypnotism is indicated in the spasmodic attacks of grave hysteria and the paralysis following, in mono-symptomatic hysteria, in ordinary hysteria, and in hysterical insanity.

In conclusion, I repeat that hypnotism is of the greatest therapeutic importance in some cases of hysteria, but that its use should be delayed until it is absolutely demanded.

382 Virginia Street, Buffalo, N. Y.

Correspondence.

To the Editor of the MEDICAL AGE:

In your issue of November 10th you speak of post-partum hæmorrhage, which calls to mind a means that, though never seen described, I discovered intuitively, so to speak, over twenty years ago, and has since enabled be to approach cases of this character with most gratifying confidence.

The object to be attained, of course, is the prompt and immediate arrest of the hæmorrhage, which Nature usually secures by contraction of the uterus. Therefore if Nature fails, let the physician endeavor to secure the same result. This can be done by passing the right hand boldly up to the placental site (which is readily discovered by sense of feeling), making a few sweeps with the back of the hand over the bleeding sinuses, at the same time inducing counter-pressure with the left hand. Hold the parts with double grasp until the right hand is expelled by a powerful uterine contraction.

By this method the physician is in immediate and absolute control of the situation, and all the leading indications are at once met. Ergot, strychnine, cannabis Indica, muriate tincture of iron, black haw, hydrastis, cold, or any other remedy or remedies, singly or combined, fail to act with the celerity and energy upon all the parts engaged in the uterine contraction as does the presence of a body within the uterine cavity of the size of one's fist. Furthermore this method controls hæmorrhage prior to uterine contraction by causing (forcing) the uterine sinuses to collapse by manual pressure.

Very truly yours,

T. SHAW, M.D.

Ypsilanti, Mich., Nov. 25th, 1893.

PUBLIC SCHOOL PHYSIOLOGY.

The following is a verbatim reply in a written examination of a public school student: "The heart is a comical shaped bag. The heart is divided into several parts by a fleshy petition. These parts are called the right artillery, left artillery, and so forth. The function of the heart is between the lungs. The work of the heart is to repair the different organs in about half a minute."

Society Meetings.

WAYNE COUNTY MEDICAL SOCIETY.

NOVEMBER 2d, 1893.

Doctor J. R. Kestell presented a paper on Sciatica: he stated he had employed blisters and deep injections of chloroform along with tonic treatment (quinine and strychnine) with good results.

Doctor James Newell remarked: "Rectal disease is a frequent cause of sciatica, but often overlooked." He had best results from deep injections of chloroform, but sometimes stretched the nerve with satisfaction. Does not think there is any specific for the disease.

Doctor J. S. Dean thought many cases were caused by pressure on the sacral plexus from pelvic maladies, and that relief could only result from strict attention to the cause. "When pressure causes inflammation of the neurilemma and neuroglia, atrophy of the nerve results, and the case is incurable; here deep injections of chloroform seem to afford best satisfaction. Sciatica, moreover, often attacks robust subjects, and tonic treatment is, as a rule, useless in these cases. The relief given by nerve-stretching is probably the result of breaking down of the adhesions pressing on the nerve."

Doctor E. B. Smith had good results from deep injection of water; strongly flexing the leg relieves in some cases. In a case of traumatic Sciatica resulting from the entrance of a nail into the foot, atrophy of the muscles resulted; the removal of the nail was followed by permanent relief with restoration of muscular contour.

Doctor R. H. Honner: "The diagnosis of sciatica is made almost certain by the localizing of the tender spots over the sacro-sciatic synarthrosis, between the trochanter and the tuberosity of the ischium, on the head of the fibula, in the popliteal space, and on the external malleolus. When tenderness is found along the whole course of the nerve the trouble is more likely neuritis. A great many cases of Sciatica are associated with rheumatism, and these will be relieved by treatment which probably would have no effect on idiopathic sciatica."

Doctor Newell gave a continued report of a case presented at last meeting, of the little girl 9 years of age who had recovered from erratic transitory pains, but after a brief intermission was attacked more violently than before, said attack being ushered in by icterus, which disappeared by the use of cholagogues, but with no relief of suffering; the aid of powerful narcotics was constantly invoked.

Doctor Honner remarked: "The age of the patient does not entirely exclude hysteria, as it is a fact that hysteria does exist in rare instances in children. The remissions and intermissions of the attacks, as well as the fact that the child had once recovered without any evidence of nerve degeneration, will exclude multiple neuritis."

Doctor Dean: "The fact that the child was always better when the doctor went to see her is *prima facie* evidence of hysteria."

Doctor Newell also reported a case of Appendicitis, with operation. Two perforations were found. A marked peculiarity of the case was the fact that temperature remained high for two weeks after the operation.

Doctor Smith cited a case in which perforations were found within forty-eight hours after the first beginning of the attack, and in which the temperature remained high for a long time after the operation.

R. H. HONNER,
Secretary.

EXIT ANOTHER HUMBUG.

The "Tyson Gold Cure" for drunkards has been exploded in Melbourne, Australia, by proceedings under the "Sale of Poisons Act." The Government analyst discovered that the preparation contained chiefly nux vomica. The Australian Medical Journal remarks: "Since the fine and cost were inflicted, ten-guinea fees for the cure have declined considerably."

Also the Keeley of American "Gold Cure" fame has discontinued his suits against the Lancet and Medical Press (London), paying costs to the amount of nearly six hundred dollars. The "bluff game" failed to "phaze" our trans-Atlantic contemporaries. They did their best, however, to egg on Keeley to a trial, but he apparently feared to "face the music."

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., DEC. 11, 1893.

Editorial.

WILLIAM A. HAMMOND AGAIN.

This individual, not satisfied with the notoriety gained by him under the Court Martial of 1864, and with the prominence which has been given in this and other journals to the "Animal Extract" fake, has again bobbed up serenely before the public. This time it is in the form of a circular, issued by the Columbia Chemical Co. of New York, of which said Hammond is President and chief stockholder, unless he has very recently resigned his position or transferred his stock. This circular we reproduce as follows:

OFFICE OF COLUMBIA CHEMICAL CO.
90 South Fifth Ave., New York.

CAUTION!

The Columbia Chemical Company desires to call the attention of the Medical and Pharmaceutical Professions to a fraudulent procedure practiced by certain unprincipled persons. The bottles which have been used for the Animal Extracts, and bearing the label of this company are subsequently filled by these falsifiers with an inert or deleterious compound containing none of the essential constituents of the genuine extracts and are then either sold as the real products or submitted to analysis by chemists who are unaware of the facts.

Thus, the contents of one of these bottles purporting to be *Cerebrine* as made by Doctor Hammond's process, was recently examined by a chemist in Chicago and was found to be entirely free from alcohol, water, boric acid, and animal matter of any kind; but to consist almost entirely of glycerine to which apparently nitro-glycerine had been added.

Another lot said by a Doctor Stockwell of Detroit, to have been experimented with by him, was declared to be altogether inert. This person who is an employe of Parke, Davis & Co., asserts at one time, that he obtained the material in "Washington," again that he got it from the "Columbia Chemical Company," and again that he procured it from the "Columbia Chemical Company in Washington." As there is no Columbia Chemical Company in Washington it is evident that there is a false statement somewhere. Either the mixture was made in Detroit by some other process than Doctor Hammond's, or a quantity in process of maceration and therefore not completed was surreptitiously taken from his laboratory.

A prominent physician writes us that he is quite familiar with the taste of Cardine, having used it extensively in his practice but that a bottle of it recently procured from us through a third party is "intensely bitter," and is suggestive of fraud through the addition of strychnia. All Cardine has a very slight bitter taste which soon disappears, but this specimen had evidently been tampered with.

Physicians and Pharmacists are therefore requested to be on their guard against imposition and not to purchase any Animal Extracts without being sure that they are made according to Doctor Hammond's published formulas.

A safeguard against fraud is the fact that all Animal Extracts are put up in cartons closed with a label identical with that placed on the bottle. See therefore that this label remains intact.

THE COLUMBIA CHEMICAL COMPANY,
90 South Fifth Ave., New York.

While the ultimate intent of the above is no doubt to increase the agitation of the subject at issue in order that Hammond through his commercial interests in the Columbia Chemical Co. may profit by the demand (?) which may be created for "Cerebrine," "Cardine," "Medulline," "Testine," *et al.*, he evidently has the other object in view of preparing or attempting to prepare the minds of the professional public for the appearance of such analyses of Cerebrine as may be published in the future.

It will be remembered that Professor Delafontaine, in the Journal of the American Medical Association for Sept. 26th, published an analysis of "Cerebrine" wherein he demonstrated the presence of nitroglycerin, to which he attributed what result was obtained from the use of "Cerebrine." Hammond in a later number of this journal made a reply, shrewdly worded, sophistical and characteristic of the man, the sum and substance of which, however, when boiled down was to the effect that the Delafontaine analysis was not an analysis of "Cerebrine" (Hammond), but was the result of a deep-laid plot on the part of some manufacturing house to soil his hitherto immaculate reputation as a distinguished man.

The circular quoted above handles the

subject in a style less sophistical though less elegant. It has a sort of commercial taint to it in view of the fact that it dispenses with unnecessary verbiage and comes right to the point, charging Doctor Stockwell, Doctor Brower, and Doctor Delafontaine, who have used Hammond's "Cerebrine," with dishonesty.

The Columbia Chemical Co. is very careful not to mention any names but that of Doctor Stockwell, to whom they allude as an employé of Parke, Davis & Co., which of course brings the whole charge back upon that house.

This attempt on the part of Hammond to hoodwink the professional public will be entirely futile, for if any chemists in high standing throughout these United States shall publish in the future their analyses of "Cerebrine" (and it is quite evident from this circular that Doctor Hammond expects that they will publish such analyses and that they will be unfavorable to his reputation for veracity), the professional public will be very apt to accept these statements with less incredulity than they do those of the Columbia Chemical Co. as Hammond's mouthpiece.

We have to state, upon the authority of Parke, Davis & Co. and of the editor of this journal, that they had nothing to do, either directly or indirectly, with the investigation in question, and that their first knowledge thereof was derived from its appearance in the Journal of the American Medical Association in Chicago. Both parties therefore pronounce the Columbia Chemical Co. and Doctor Hammond as willfully and knowingly misrepresenting the truth in this respect.

CHOLERA PROPHYLAXIS AND TREATMENT.

During the past two years, and especially since cholera appeared in Europe as an epidemic, a great deal of rubbish has been written regarding both treatment and prophylaxis. Many of the ingenious measures advocated received thorough trial in the St. Petersburg hospitals during the past season, and the result has not been at all in consonance with the claims previously made. For instance, the use of Cantani's intestinal injections (enteroclysis) of tannin has been abandoned, being found practically useless. In the Obuchovski Hospital, intra-venous injections of saline solutions were tried, but the benefits resulting were only fleeting in character, and fully bear out the assertions of inutility made nearly half a century ago by Sir Thomas Watson. Indeed, the Russian physicians as a rule have abandoned all forms of so-called "modern scientific treatment" as "worse than useless." Internal antiseptics must be considered in the same category; these received very thorough investigation in the Alexander Hospital. The consensus of opinion appears to be that best results are obtained from the use of heat, both external and internal: very hot baths (both air and water) and hot rectal injections are deemed of great value—a statement that certainly cannot be made regarding any other remedial measure or drug, with the exception, perhaps, of nerve and heart stimulants.

In the way of prophylaxis we have the "Haffkin Treatment," so-called. This has been profusely exploited by a certain class, and the claims made are so extravagant in some instances as to deservedly cast discredit thereupon. It must be remembered first of all that the relationship of the so-called comma bacillus to cholera has never been satisfactorily established; second, that even supposing the bacillus to be the cause of cholera, immunization by means of an artificially cultivated germ presents problems that would require a great deal more study and general working-out than have yet been given thereto; third, the claim that cholera inoculation protects the system against cholera as certainly as vaccination does against smallpox is far from being well taken, admitting all other claims. Manifestly there is no similarity between the symptoms of cholera and those of intra-peritoneal injections, and it is notorious that one attack of cholera *does not* protect the system against a second invasion of the disease.

"Haffkinism," so-called, seems to be spreading in India, but it is somewhat remarkable that the converts thereto are chiefly and notably outside of the medical profession. That it has become a "craze" must be evident to anyone who picks up the East Indian journals; it is at once apparent it has been announced in many places by "a flourish of trumpets and beat of drums"—even the

Indian Government has been induced to countenance the fever, and to direct that every assistance and facility be afforded to Haffkin in carrying out his operations and teachings.

In this connection it may be remarked India is certainly a long way for Doctor Haffkin to go for the benefit of science and suffering humanity when the same objects could have been much more readily attained in Europe, where the expectation of the recrudescence of the disease has been fulfilled. Then both Koch and Doctor Haffkin have been forced to admit that cholera cannot be induced by swallowing bacilli, whereas the experience of all practitioners in the Orient is that infection must be induced through the medium of the alimentary canal.

It may be remarked *en passant* that Doctor Haffkin's process of protection consists in the injection of a weak, followed by a strong, solution of comma bacillus. Apparently he is in ignorance that Doctor Kline, of London, long since proved that like intra-peritoneal injections of *bacillus coli communis*, of the bacillus of typhoid, the *bacillus prodigiosus*, the *vibrio* of Finkler, and the *proteus vulgaris*, induce precisely the same results and equally as much protection.

Another remarkable fact is that although cholera is existent in many portions of India, "Haffkinism" is being tried only in those portions of the Hindu peninsula where the disease is not epidemic, and consequently where the test of its efficacy will be far from crucial.

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In this connection it may be of interest to repeat the fact that at a meeting of the Berliner Medizinische Gesellschaft on June 21st last, Professor Oscar Liebreich read a paper entitled "Critical Remarks on the Methods of Examining Cholera Excreta," and that the gist of the paper was to the effect that Koch's methods cannot lay claim to the reliability in cholera diagnosis which is asserted for them. One by one these methods as taught and practiced—viz., the microscopic and culture, the animal experiment, and the cholera red reaction—were subjected to severe criticism, with clear proof of their insufficiency. Liebreich, while yielding to none in his conviction of the importance of bacteriological study, declares he feels it imperative to make a stand against uncalled-for enthusiasm and haste in arriving at conclusions. He dwelt upon a mistaken modern tendency to seek the source of cholera exclusively in external causes, ignoring Virchow's researches upon the cell as the element which, by losing its power of resistance, predisposes to disease.

THE QUESTION OF RACE IN MEDICINE.

Prof. A. Bordier, of the Grenoble School of Medicine, wonders at the heedlessness of medical students with respect to the important factor of race in disease and in therapeutics, justly asserting that this element is of quite as much importance in the human kind as in veterinary science. Horses, cattle of every description, and even the members of the vegetable kingdom, are carefully studied with a view to establishing the variations wrought by climate and other natural causes, whereas in the reports of maladies the medical man contents himself with stating whether the patient is blonde or brunette, large or small, whether the eyes are blue, brown, or black, whether the breasts of a woman are globulous or pyriform, etc. The very limit is reached when the writer takes pains to set forth previous maladies, the health of the father or mother, of the brothers and sisters, and never more.

The facts cited by Prof. Bordier are of great interest in their bearings on this question of race, and, though some of the data are familiar, we quote briefly, as follows:

"The black race presents very distinct pathological peculiarities. It seems to have a pronounced immunity from cancer. Drs. Giard and Huard, at Senegal, have never observed cancer in a black. The only case ever reported by Dr. Landry was that of a mulatto who had evidently inherited the aptitude from the white father.

"The negroes, however, possess a pronounced aptitude for tetanus, and American statistics show that there are 4,506 cases of tetanus amongst the blacks for every 1,000 amongst the whites.

"The negro seems to have little aptitude for diphtheria.

"As for tuberculosis, the negro has an aptitude for this disease unparalleled save in the cow. Even in his own environment, the

black succumbs to this malady with extreme frequency. At Gibraltar the mortality of the negroes from phthisis is 43 in every 1,000 deaths, whilst among the English in the same place it is 5.3 per 1,000 deaths. In Peru there is a regular scale of frequency of tuberculosis: the Indians, enjoying the greatest immunity, come first; then follow the Spanish families; and finally the negroes, who present the maximum. In every 100 cases of death from phthisis in Peru, there are carried off 1.7 Indians, 13.5 Metis, 34.3 whites, and 48.5 negroes.

"But, on the other hand, they have a more pronounced immunity from paludal fever. I may add that for a long time, and even at a period previous to our knowledge of the parasitic nature of tuberculosis and paludal fever, the physicians of Algeria had observed a sort of antagonism between the two maladies. The example of the negro proves that the proper soil for the one is not the proper soil for the other. The negro is the only possible pioneer in hot and malarial countries. His immunity is by no means absolute, but his aptitude is incomparably less than that of the whites. Moreover, when he does give way to the fever, it is not of the same type.

"The dysentery of tropical lands is less frequent and less grave in the negro than in the European.

"As for yellow fever, he possesses a remarkable immunity, which has been regarded as almost absolute during several epidemics. Thus during the Mexican War, at Vera Cruz where yellow fever was ravaging and decimating French soldiers, as also the Kabyles and Arabs in the regiments brought from Africa, not one of the 453 negroes from Darfour and Cordofan, loaned by the Viceroy of Egypt, was attacked. Struck by these facts which he had several times observed, Dr. Nutt was almost warranted in asserting that one quart of negro blood was worth more as a preservative from yellow fever than vaccine as a preventive of smallpox. In fact, the Metis or half-breeds are attacked in proportion to the quantity of white element that they possess; for example, in the same expedition to Vera Cruz, the very light mulattoes from Martinique succumbed in great numbers.

"The aptitude of the negro for cholera is very great. In all the epidemics the negroes have succumbed in a proportion far greater than that of the whites; and this aptitude persists in all the half-breeds or mixed races possessing a certain element of the black—the Malays, for example.

"Though less pronounced, the pathological characteristics of the yellow race are not less real. These people are subject to ophthalmia and myopia. Tetanus is much less frequent amongst them than in the black races, whereas mental alienation and suicide seem more frequent. The yellow peoples seem less subject to cholera than the white. Thus at Guadaloupe, during a murderous epidemic observed by Dr. Walther, the mortality from cholera was distributed as follows:

Blacks	9.44 per cent.
Mulattoes	6.32 "
Whites	4.31 "
Hindu coolies	3.86 "
Chinese	2.70 "

"Observe in this table that the Hindu coolies, who are the product of an ancient mixture of blacks (the Moundas) and of yellow peoples (the Dravidas), have a mortality intermediate between that of the black and that of the yellow peoples; just as in comparative pathology we see the mule assume a position, with respect to its pathological aptitudes and immunities, between the horse and the ass.

"Authorities are united in the statement that tuberculosis is much less frequent in the yellow races than amongst the whites, and this has been found to apply quite as much to the yellow peoples of Asia as to the yellow tribes of America. In Peru and Brazil, tuberculosis rages with extreme severity among the negroes, and the whites as well, whilst the Indians are spared."

Prof. Bordier cites a number of very interesting facts in connection with the Hebrew race. The people of mediæval days were often struck by the apparent immunity of the Jews in times of epidemic, which, reinforced by religious fanaticism, prompted the conclusion that they were "sowers of pestilence," and that they poisoned the fountains. Their sedentary mode of life, their sobriety, their freedom from contact with the great majority of the Christian population, doubtless contributed to shield them from contagion; finally, they probably possessed a certain degree of real immunity. In our day it seems to be a fact that croup is less frequent amongst the Jews, and that, on the other hand, diabetes is frequent. All this presupposes a very different chemical and molecular organization. Very evidently, moreover, they possess a special cerebral organization, and, without here citing the example of Saul, the love of music seems to be highly developed amongst them: Meyerbeer, Halevy,

Mendelssohn, and Rossini were Jews. Like their brothers, the Phœnicians, the merchant predominates in them; but at all times they have had an incontestable taste and aptitude for the sciences. Mental alienation is more frequent amongst them than in other races—Danish statistics give, for every thousand of each race, 3.34 Christians and 5.85 Jews. It must be conceded that the dreams, the hallucinations, the prophetic gift, and all the suggestive or erethistic phenomena play a great rôle in the history of the people of Israel.

OXYURIS VERMICULARIS.

Doctor Etter, in the Correspondenz-Blatt für Schweizer Aerzte, recommends as a simple and "sure means" of freeing patients from oxyuris, that every evening, at bedtime, the patient be placed in the knee-elbow position, and the physician proceed to catch all discovered parasites, one by one, "by means of a pincette, hairpin, or other appropriate instrument." The "hunting," which at first secures an abundant "booty," but subsequently becomes "less rich," should be diligently continued for several succeeding evenings, or until no parasites can be found; "a complete cure requires about three weeks' time."

Such is evidence of the heights and depths of absurdity to which medical science can reach. Coming from such a source too, from the land that is supposed to be eminently practical and rich in pathological lore, the idiocy embodied is almost beyond contempt.

Surely Doctor Etter should know that the natural habitat of the oxyuris is the cœcum—that it appears in the rectum only at the time when (driven by instinct implanted in all organisms, high and low alike) it seeks to reproduce its species. It is probable that once these parasites obtain a lodgment in the human body, they are rarely entirely eradicated. A quarter of a century since a means for their expulsion was formulated by our German confrères, which consisted merely in flooding the lower intestines, so far as possible, with weak suds of Castile soap and tepid water; the introduction was made by means of the usual nozzle and rubber tube, to the further end of which was attached a receptacle for holding the fluid. In the knee and elbow position it was possible, by elevating the container to sufficient height, to induce sufficient flow to thoroughly irrigate the rectum, and often, in a considerable degree, to wash out the cœcum. Relief, which sometimes appears to be permanent, is also readily obtained by means of injection of Quassia, one ounce of Fluid Extract to a pint of water. Camphor-, chloroform-, and tar-waters are also in greater or less degree effective.

ITEMS AND NEWS.

The Savagery of Fashion.—

Not a whit too early, but rather too late, has come the protest issued a few days ago by Mr. W. H. Hudson against the indiscriminate killing of birds for the sake of their plumage. Fashion of late has been forgetfully merciful in this matter. Birds for ladies' wear have not commanded a market, and perhaps a few struggling species owe their still recognizable existence to this cause. Unfortunately, there are signs that the grateful period of oversight has expired, for again we hear of a coming "rage" for "wings;" in other words, our mothers, wives, and daughters are being persuaded into a return to the old practices of self-decoration, which it appears were only for a time in abeyance. What these implied may be judged from the fact that many species of brightly feathered birds, according to present ornithological records, are already on the verge of extinction. Little wonder is it that this can be said when we reflect upon the heedless barbarity and wanton waste of life which commonly characterize the methods of the bird-killer, his unconcern either for close time or any other season, for the kind or number of his victims (if only he succeeds in making a living by them), and for any form of remonstrance which does not touch his pocket. The appeal to which we have referred was made to women, for whose adornment so many ruthless depredations have been made upon the treasuries of Nature. Most of them who have any pretensions either to feeling or intelligence will, we are assured, admit the force of that ap-

peal. It is indeed a monstrous thing that has evoked it. Forms of life inimitable in beauty as in adaptation, gems of Nature's workmanship, antique, enduring, irrecoverable if lost, are to be wantonly destroyed.—Why? In order that a dress or a bonnet may for some pleasant hours attract a little social attention. A more Goth-like ideal of refinement it would be difficult to find. The force of trade interest lately acquired for seals a right to protection. Even the same force, wherever it is instructed by science and supported by the most rudimentary sense of humanity, demands a similar right for the feathered creation. It is sincerely to be hoped that the purchasing public and our legislators alike will early recognize this right, and will provide against any attempt to infringe it.—*Exchange.*

Personals.—

Doctor J. Antonio Delgado, the well known Guatemalan physician, is dead.

It is understood that M. Dujardin-Beaumetz recently successfully underwent the operation of chlecystenterostomy.

Professor Schwimmer, of Buda-Pesth, the well known dermatologist, has had bestowed upon him the title of Royal Counselor.

Professor Ehrendorfer has been elected Rector Magnificus in the University of Innspruck for the academic year 1893–94.

The eminent Professor of Midwifery in Queen's College, Ireland, Doctor R. F. Dill, recently died in Belfast at an advanced age.

Doctor William Goodell has resigned the chair of Gynæcology in the University of Pennsylvania, Charles B. Penrose succeeding thereto.

Professor Julius Sommerbrodt, of Breslau, the well known teacher and author, and one of the first advocates of the employment of creasote in phthisis, is dead.

The faculty of the Medical Department of the University of Tennessee, for unprofessional conduct, has revoked the degree of M.D. conferred upon E. F. Rose, of Dukedom, Tenn.

We regret to announce the death, in Chicago, from cerebro-spinal meningitis, on Nov. 19th, of Doctor Charles W. Earle, well known from his connection with the College of Physicians and Surgeons, and Woman's Medical College.

The well known obstetrician, Professor Leishman, author of a standard work on midwifery, has been compelled, owing to ill health, to resign the chair in the Glasgow University which he has filled so acceptably for the last quarter of a century.

Rapidity of Nerve Action.—

Professor Muybridge by the following experiment proved the relative slowness of nerve action as compared with electricity: A woman stood in a bath tub, while another sat on a raised chair and poured a bucket of water over the head and shoulders of the first. In order to make the shock more intense, the bucket was filled with ice-water, unknown to the victim. One view showed the water tipped over and falling, yet not quite touching the girl's head. The next exhibited the water splashing from her head and shoulders, but with no signs of sensation. In the third picture she was just beginning to respond to the shock, and the subsequent views illustrated the further phases of the response. The point of special interest, however, is in connection with the second view. The electric current had in that case first exposed the plate, and then after a very short interval had shut it off again—that is to say, had acted twice, with an interval of time between the two sufficiently long for the sensitive plate to take an impression of the view, and this after the ice-water had touched the woman's shoulders, and before she was conscious of it.

Paving-Blocks a Cause of Disease.—

A new malady in Europe is attributed by leading medical authorities of the Old World to the wooden blocks with which the streets of so many trans-Atlantic cities are paved. The ailment takes the form of quinsy and blood poisoning; in some cases attacking the throat, in others the eyes, and in some again the entire system. It seems that the wooden pavements, notwithstanding the continual cleansing to which they are subjected, gather a considerable quantity of manure and dirt in the interstices, and the practice of constantly watering them has the effect of pro-

ducing a solution particularly favorable to the development of germs. When dry it is converted into dust and blown by the wind into the eyes, noses and mouths of the long-suffering public, reaching the tonsils and the respiratory organs and producing symptoms otherwise unaccountable.—*New York Tribune.*

Can Plants See?—

The mysteries of vegetable life are not all yet explored. An Indian botanist has made experiments which induce him to say that some plants can see. Whether the inference can be accepted or not, these experiments go to show that the plants made an effort to reach supports placed at a little distance, and grew towards the supports, wherever placed. The plant was a convolvulus, and when a long pole was placed near it in such a way that the tendrils would have to turn away from the light to reach it, they invariably did so, and in a few hours twined about it. That certain plants have the sense of touch is well known.

"Heterophemy"!

An exchange soberly declares that a mastiff at Zeitz, in Saxony, has been taught to speak! "The project was difficult, but the patience and ingenuity of the master overcame all obstacles. The words taught the animal were thirty in number, mainly German, but a few French. They are not used spontaneously, but uttered at the dictation of the teacher."

The "Dog of Zeitz," if we may believe an Ananias of the last century, had a rival as a speaking dog, in Holland in 1718, which could pronounce all the letters of the alphabet except *l*, *m*, and *n*.

Case of Precocious Sexual Development.—

At a late meeting of the Paris Academy of Medicine, M. Crivelli showed the photograph of an eighteen-months-old girl whose genital organs presented a degree of development such as is usually found at the age of eighteen. The mammæ and nipples were also well developed; the mon veneris covered with lanugo, the clitoris being also very large. By investigation, Crivelli found out that the child was addicted to masturbation. The menses had appeared regularly since three months, and lasted from three to four days. Before the appearance of the menses the child feels sick for about twenty-four hours.—*Medical Times.*

More Legal Suits.—

The Chemical-Consumption-Cure Company at Cincinnati has entered suit against Doctor J. C. Culbertson, Editor of the Lancet-Clinic, for $50,000 damages because the latter applied to its chief fugler the epithet "quack." Suits have also been entered against the Medical College of Ohio, and against Doctor James M. French, for parallel causes.

Considering the fiasco which resulted from the suit against Doctor Reeves, of Chattanooga, it may be readily imagined the *raison d'être* of these legal measures is free advertising.

A Libel on the Profession.—

This is what a "Penny Dreadful" prize (!) novelist writes in one of his weekly instalments: "'After all, your story seems to bear the impress of truth, Mr. Blank; for here, look in the glass, and you will see that your shirt-front is covered with curiously colored stains, which to me have the appearance of being those of chloroform. To make sure I will call the surgeon.' And Captain Mathewson sent an officer in search of the ship's medical man, who at once pronounced the discoloration on my shirt to be chloroform stains."—*Medical Press* (London).

"Animal Extracts."—

The Quarterly Therapeutic Review abstracts Doctor Archie Stockwell's report on "Cerebrine" and "Cerebrin," published in the Medical News of August 26th, and remarks regarding these two preparations: "Doctor Stockwell's contribution disposes of both, and without going into the polemics of this case it would probably be equally true of the several other 'animal extracts' for the cure of organic disease, except perhaps the thyroid gland in that very rare disease, myxœdema."

That Great Consumption Cure.—

A correspondent asked the editor of the Times and Register an opinion on the Cincinnati chemical treatment for consumption, and obtained the following reply:

"I think Amick simply adopted Shade's calomel treatment, which has been fully described in our columns. Shade came out like an honest professional gentleman, and gave his brethren the benefit of his discovery, as he deems it. Amick took up the idea, and operated it on a basis of quackery, for which he was deservedly expelled from his college and societies."

Suggestive.—

An Irish newspaper has the following, doubtless truthful, advertisement:

"Wanted: A gentleman to undertake the sale of a patent medicine. The advertiser guarantees that it will be profitable to the undertaker."

This is as good as the utterance of a Windsor, Ontario, undertaker who had just purchased a new hearse, when remonstrated with upon his extravagance. Said he: "There are lots of people in this town who will be dying to ride in that coach."

What Next?—

The Quarterly Journal of Inebriety believes bacterial organisms are essential to the giving of flavor and quality to tobacco; that pure tobacco may be inoculated with the bacteria of the Havana leaf, and fermentative changes induced in a way to enhance the quality and give it rich flavor. If this be true, the possibilities in cabbage-leaf traffic are great.

Longevity and Canadian Veterans of 1812.—

Pensions are still being paid by the Dominion Government to survivors of the war of 1812. There are yet fifty-two recipients, the youngest being 90 years of age, the oldest 105. The great preponderance of French names is remarkable as showing the toughness and enduring qualities of the French "*habitant*."

Doubtless!—

The editor of a contemporary resents with indignation the statement of London and Edinburgh scientists that lobelia will kill a hog. The editor says he has used the drug for twenty years, and thinks he ought to know.—*New York Medical Times.*

How are the Mighty Fallen.—

The Washington Post says the Sanitarium at the head of Fourteenth street operated by the only great "(Retired)," has passed into the hands of a syndicate who will henceforth operate it as a "jag cure."

Sumbul.—

The Russian Government has sent a commission of physicians to Asia Minor to investigate the treatment of cholera by Sumbul. This drug is said to enjoy considerable repute in this connection throughout Central Asia.

Rearing of Japanese Infants.—

Doctor Ashmead says Japanese children nurse until they are six years old. They do not use cow's milk, and this in a great measure accounts for the absence of tuberculosis among the people.

Sporadic Cretinism.—

Facetious tourist to Swiss peasant: "Is it true your Canton is full of idiots?"

Peasant: "Yes sir, in summer; but they do not stop long."—*Bristol Medico-Chirurgical Journal.*

Ringworm.—

A paragraph is going the rounds in medical journals to the effect that a saturated solution of Salicylic Acid in collodion will promptly relieve this malady. We wish it may be true.

A Handsome Fee.—

It is reported that Doctor W. Lyon Playfair will receive $10,000 besides his expenses for attending the accouchement of Princess Marie of Edinburgh in the Roumanian capital.

Antipyretic Drugs.—

Doctor N. S. Davis declares that antipyretic drugs are of value only as nervous sedatives. He considers cold the best of all remedies for the reduction of temperature.

Book Reviews.

STUDENTS' MEDICAL DICTIONARY. By Alexander Duane, M.D. Cloth; square 8vo; pp. 658. Price, $4.25; sheep, $4.50. Lea Brothers & Co., Philadelphia.

Doctor Duane's experience as a medical lexicographer and his accurate scholarship are sufficiently attested by his position as revisor of medical terms for Webster's International Dictionary. In the present work he provides medical students with full information concerning every word they will meet in acquiring a medical education. The vocabulary is exceedingly liberal, and its fullness is paralleled by the treatment accorded to each word. The definitions are explanatory in that they include not only a statement of meaning, but much descriptive matter under headings which would be inadequately represented by a definition however full—thus, under diseases are given their causation, symptoms, and treatment; under important organs, an outline of their structure and functions; under each drug, its action, uses, and preparation, the information being arranged in logical order so as to give a rational and connected idea of the subject. Extensive tables of Bacteria, Muscles, Arteries, Veins, Nerves, etc., are included. Each word, moreover, is followed by its correct pronunciation, a new feature in works of this class, given by means of a simple and obvious phonetic spelling. Derivation, an unexcelled aid to remembrance of meanings, is likewise fully and clearly stated, Greek letters being replaced by those of the English alphabet. As a whole this dictionary is executed on a plan embodying in a high degree every qualification of value to students, and we may therefore confidently predict that it will become the standard and favorite work of its class.

THE MODERN CLIMATIC TREATMENT OF INVALIDS WITH PULMONARY CONSUMPTION IN SOUTHERN CALIFORNIA. By P. C. Remondino, M.D. Cloth; square 16 mo: pp. 120. Price, 50 cts. Geo. S. Davis, Detroit.

Dr. Remondino has for many years enjoyed a wide reputation as an accomplished scholar and vigorous writer, and this terse, interesting and suggestive volume is in every respect worthy of his able pen. A style exceptionally clear and animated is here united with such a wealth of practical experience as is possessed by scarcely another medical man in the United States along similar lines. More than twenty years of residence in Southern California, a wide and varied medical practice, and an exceptional faculty for observation and reflection, impart uncommon value to this little work. Moreover, from cover to cover there is not a dull page; all is bright, terse, and readable.

Dr. Remondino is nothing if not honest in the treatment of his theme. Warm in his recommendation of this marvelous clime, and strong in his conviction of its benignant influence in restoring health and prolonging life, he is yet cautious and exact in statement —ever on his guard against conveying the too common error that physical bankruptcy can be rendered solvent by an equable and invigorating atmosphere without proper medical counsel, a judicious mode of life, and a fitting regimen.

Special value is imparted to this little volume by the author's careful attention to minute yet important details. The patieut is informed how to travel, what to avoid *en route*, what dietary to observe, the various necessaries to include in his outfit, and is provided with a wealth of practical, sensible suggestions manifestly begotten of long experience.

Placed in the hands of the invalid looking to California as the land of delivery from disease, or of the healthy traveler seeking variety and pleasure, Dr. Remondino's book will prove not less useful than entertaining. It is well printed and bound.

THE ATLANTIC MONTHLY. Price, 25 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

The December issue of this representative American magazine is unusually full in all departments. Chapters seven and eight of "The Man from Aidone," by Elizabeth Cavazza, lack none of the interest of those preceding; "Thoreau and his English Friend, Thomas Cholmondeley," are written of by F. B. Sanborn; of more than ordinary interest is "Birds at Yule-Tide," by Frank Bolles; Miss Alice W. Brotherton contributes poetry under the title of "The Blazing

Heart;" Lafcadio Hearn writes "Of the Eternal Female"—a sketch in Japanese sociology; "Tom o' the Blueb'ry Plains" is by Miss Kate Wiggin; Bradford Torrey writes of "The Flat-Woods," giving a description of bird life as found in the monotonous piney forests of Florida; chapters twelve and thirteen of "His Vanished Star," by Charles Egbert Craddock, lose none of the interest which has been thus far kept up by the tale; Hamlin Garland writes of "Western Landscapes;" "Ideal Transit" is an anonymous paper dealing with the defects of our present modes of travel; Francis N. Thorpe deals with "Democracy in America," Woodrow Wilson with "Mere Literature;" "Chaucer's Pardoner" is by George Lyman Kittredge. Other articles of interest are "Some New Light on Napoleon," and "The Son of a Prophet;" then follow "Comment on New Books" and "The Contributors' Club."

INTERNATIONAL CLINICS. Volume III, third series 1893. Edited by John M. Keating, Judson Daland, Mitchell Bruce, and David W. Findlay. Cloth; 8vo; pp. 356. Price, $2.75. J. B. Lippincott Co., Philadelphia.

This work, as the title sets forth, is a collection of the best and most practical clinical lectures delivered in the leading medical schools of Great Britain and Canada and the United States, duly reported by competent medical stenographers, and arranged in a form best suited for the purposes of the work.

The volume before us includes clinics from Edmund Andrews, John Ashhurst, I. E. Atkinson, Norman Bridge, I. N. Danforth, E. D. Fisher, George W. Gay, William Goodell, Frederick P. Henry, M. B. Hutchins, E. F. Ingals, Thomas J. Mays, Paul F. Mundé, Roswell Park, A. J. C. Skene, and others.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. The Lippincott Co., Philadelphia.

The November Lippincott offers a complete novel entitled "An Unsatisfactory Lover," by Mrs. Hungerford ("The Duchess"); John Gilmer Speed continues the Athletic Series with a paper on "Golf;" "The Lapp Maiden's Song" is a poem by Hjalmar Hjorth Boyesen; "The Rustlers" is number nine of Lippincott's notable stories, Alice MacGowan being the author; Lewis M. Haupt writes of "Progress in Local Transportation"; "The Wind and the Tree" is a poem by Bliss Carman; "How the Light Came," by J. Armory Knox; "An Old-Fashioned Garden," by Charles C. Abbott; "Expensive Religion," by Phil Stansbury; "The Awakening," a poem by Richard E. Burton; "Why the Body Should be Cultivated," by Wilton Tournier; "Two Turnings," by Florence E. Pratt; "A Three-Volume Tract," by Frederic M. Bird; "Men of the Day," by M. Crofton.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this work has reached its *eighth edition* is sufficient evidence of its popularity and practical usefulness. In size and shape it is by long odds the most convenient and the best of all of the "Visiting Lists;" it will not break down in the pocket. A prominent feature is the absence of all "dead wood" and advertisements, and the extremely convenient arrangement of most practical contents. The information most demanded for ready reference is to be found on the inside covers or on the fly-leaves, including use of and changes to the metric system. The posological information is to a great extent a new departure, being very thorough and complete, and so arranged that the dose of any drug can be determined instantaneously; further, it is newly revised, and embraces the very latest (including the non-official) remedies introduced, up to and inclusive of 1893. Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, loss, etc. Paper and binding are alike superb.

THE DELINEATOR. Price, 15 cents; $1.00 a year. The Butterick Publishing Company (Limited), New York.

The Christmas number is rich in material pertaining to the holiday season. The styles for the month are exceptionally handsome and appropriate, and the younger members of the family receive special attention in an illustrated article entitled "Party Dresses for Misses and Girls." There is also an appro-

priate article on Fashions in Fur Garments. A paper that is invaluable to all ladies is called "Some Suggestions for Home-Made Christmas Gifts," and the housewife is especially considered in "Dainty Desserts for the Holiday Season." Christmas Legend and Folk-Lore is most interestingly treated, and as an antidote there is a description of a very modern Kriss Kringle Party. The children will be delighted with the entertainment provided for them, and the parents will appreciate the ideas contained in The Children's Christmas. In addition to this special matter there are articles on many popular subjects. "Dancing" and "Lawn Tennis," the two papers in the Sports and Pastimes series, are brought to a close this month; Household Renovation tells about floor coverings, furniture, and moths; Child-Life deals with recreation for boys and girls; Physical Culture continues instruction in expression; and Around the Tea Table makes us acquainted with the fashionable fancies of the season. Novelties are illustrated in the papers on Knitting, Crocheting, Tatting, etc., with full instructions.

SCRIBNER'S MAGAZINE. Christmas number. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The December number contains "The Bachelor's Christmas," by Robert Grant; "A Search for Della Robbia Monuments in Italy," by Allan Marquand, illustrated by reproductions in tint from photographs; "The Fullness of Life," by Edith Wharton; "The Source" (illustrated), by Henry Van Dyke; "January and May," a song with full-page drawing and ornamental borders, by W. W. Gilchrist; "Constantinople," by F. Marion Crawford; "At a Northern Window," by Edith M. Thomas; "An Unpublished Work of Sir Walter Scott," the introduction being by Andrew Lang, and which deals with private letters in King James' reign; "Winter Song," by Duncan Campbell Scott; "An Artist Among Animals," by F. S. Church; "The Semaphore," by Herbert D. Ward; "Voices and Visions," by Thomas Bailey Aldrich; "Vale," by G. R. Tomson; "How the Captain Made Christmas," by Thomas Nelson Page; "Yesterday's Flowers," by Richard Henry Stoddard.

As a whole this number more than sustains the reputation of the past. It is by long odds the best holiday number we have seen.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure, New York City.

In the December number, Archdeacon Farrar chats entertainingly about his life and work, and also such contemporaries as Tennyson, Macaulay, Dean Stanley, Longfellow, etc.; Mrs. Cameron, an intimate friend of Tennyson's, furnishes some interesting photographs of the Poet Laureate and his friends. Professor Henry Drummond, who rarely contributes to magazines, has written a paper which shows a marvellous grasp of boy nature; "A Visitor and His Opinions" is by Mrs. Oliphant; Conan Doyle contributes the last of the achievements of "Sherlock Holmes;" Charles A. Dana, of the New York Sun, gives a narrative of his visit to Jerusalem; under the title of "Human Documents" appears an analysis of the characters of Mr. W. T. Stead, Whitelaw Reid, and William McKinley. Octave Thanet contributes a bear story which is decidedly novel.

REFERENCE HAND-BOOK OF MEDICAL SCIENCE. Volume IX. Edited by Albert H. Buck, M.D. Sheep; pp. 1080. William Wood & Co., New York.

This is the final volume, and likewise Supplement, of a monumental work that most thoroughly discusses every branch of medicine and surgery in detail, and likewise those collaterals which are immediately of service in connection therewith, such as Veterinary Medicine, Sanitation, Climatology, etc. The completed work is simply a library of itself, being cyclopædic in scope and in information; and since the issuing of Ziemssen's Cyclopædia, by the same publishers, there has been no work, not even the classic of Quain, that is so complete in its delineation of the subjects treated of. For the busy practitioner it is much more comprehensive, much more satisfactory for reference, and every way more convenient, than a series of text-books.

PHYSICIAN'S POCKET DAY-BOOK. By C. Henri Leonard. Morocco; long 16mo. Price, $1.00. Illustrated Medical Journal Co., Detroit, Mich.

This "List" or "Day-book" is now in its

sixteenth year of publication. It is calculated to accommodate charges for fifty patients daily, and besides is provided with cash columns, obstetric records, space for diagnosis, records of treatment, etc. The name of each patient requires to be written but three times in a month. It has the usual printed matter, such as dose-list, poisons and antidotes, urinary tests, weights and measures, etc.

System of Genito-Urinary Diseases, Syphilology, and Dermatology. Edited by Prince A. Morrow. Volume II; cloth; 8vo; pp. 917. D. Appleton & Co., New York.

This volume surpasses any work that has been published within recent years in its completeness, and likewise in the character of its illustrations. Special attention is given to the study of syphilis, and its modern bacteriological relations. The relations of syphilis to tuberculosis, rachitis, tabes, and the many obscure diseases of the nerves, are also given prominent place. Likewise the relations to public health and the socio-economic aspect of the disease.

Medical News Visiting List for 1894. Seal-grained leather; 16mo. Price, $1.25. Lea Bros. & Co., Philadelphia.

This "List" adapts itself to any system of keeping professional accounts. It is furnished both dated and undated, in weekly or monthly form as desired. When preferred, a ready reference thumb-letter index is added at an expense additional of 25 cents. The needs of the physician seem to have been anticipated in this List, which is one of the best of its class.

Outlines of Obstetrics. By Charles Jewett, A.M., M.D. Cloth; 12mo; pp. 264. Price, $2.00. W. B. Saunders, Philadelphia.

This syllabus is intended as an aid to the student in both the didactic and the practical work of the college course—chiefly to help the student in securing classified knowledge of the outlines of the subject. The work may also oftentimes prove of value to the practitioner as a convenient hand-book for reference.

The Physician's Visiting List. Leather; small 16mo; pp. 176. Price, $1.00. P. Blakiston, Son & Co., Philadelphia.

The edition before us is calculated to accommodate twenty-five patients per week, two weeks occupying the double page. The best evidence of the worth of this book is the uniform popularity it has enjoyed notwithstanding the vigorous competition during late years.

Littell's Living Age for 1894.—Lovers of choice literature will feel themselves repaid for a subscription to this rare and valuable old periodical. Closing its fiftieth year, and entering upon its two hundredth volume, it was never better than now, and it enters the new year with renewed vigor and vim.

Elaborate reviews of recent publications; the latest results of scientific research; biographical sketches of eminent characters; travel, exploration, literary criticism, and every phase of culture and progress in the European world; with fiction and choice poetry: all these make up The Living Age.

In addition to the productions of the leading British writers, The Living Age will publish during 1894 copyrighted translations of noted French and German authors. A story of thrilling interest entitled "Manette Andrey—a Picture of Life during the Reign of Terror," from the French of Paul Perret, will be begun in the first January issue, which is the opening number of a new series and begins the two hundredth volume of the magazine.

A curious and captivating work, also from the French, will follow "Manette Andrey," while early in the new year will appear a charming short serial, by Ernst Eckstein, the famous German romancist.

The publishers offer most generous inducements to new subscribers. For $8.50 they will send The Living Age, postpaid, and a set of Ridpath's famous History of the United States, in two volumes, bound in maroon cloth; or, for $9, the Personal Memoirs of Philip H. Sheridan, U.S.A., also in two volumes, handsomely bound in half-seal. These are extraordinary offers, for the books are no cheap reprints or shop-worn copies, but new works published at $5 and $9 a set, respectively. The prices named include postage on The Living Age only.

New subscribers for the year 1894, remitting before January 1st, will receive the weekly numbers of 1893 issued after the receipt of their subscriptions, free.

This magazine at $8 a year is cheap. Sample copies with descriptive and club circulars may be obtained by sending 15 cents to Littell & Co., Boston, Mass.

Therapeutic Brevities.

Kava-Kava in Gonorrhœa.—Doctor John E. Bacon has studied the physiological action of the drug, which contains a crystalline principle, *Methysticin*, and an acrid resin, *Kavin*. He has used a fluid and a solid extract of the root. A full dose of the former gives rise to a pronounced anæsthesia of the tongue and mucous membrane of the mouth and throat, lasting ordinarily about an hour. No irritation is produced by the fluid extract, but the solid, brought in contact with a mucous membrane, causes considerable pain, followed after a time by a complete loss of sensibility which persists for a period varying from twelve hours to three days. Therapeutic doses of the fluid extract (one-half to one drachm every four hours) increase the force and frequency of the pulse, increase the amount and diminish the specific gravity of the urine, and render it alkaline. He reports eighty-two consecutive cases of gonorrhœa, in which it relieved the ardor urinæ, scalding, and painful micturition. "It will control and cure an ordinary case in from fifteen to thirty days without recourse to any topical treatment." He believes that it does this by controlling the symptoms, and by a certain antiseptic action due to its intense alkalinity. – Stricture very rarely follows an attack.

[This remedy has enjoyed an excellent reputation in France for many years, and our observations, in the main, confirm the conclusions presented.—R. W. Wilcox.]—*American Journal of the Medical Sciences.*

Treatment of Myxœdema.—Doctor Allen Starr, of New York, declares he treated three cases of myxœdema successfully by means of extract of thyroid gland. The patients were all women; two aged 46 and one aged 22. In the first case six drops of the extract were administered three times daily, being increased one drop each successive day; improvement was noticeable in ten days, and from that time on was rapidly progressive and continuous. The œdema practically vanished; there was entire freedom from pain, and she slept well; her temperature rose from 97° to normal; "to-day she is able to walk several miles, and the improvement of her mind has been more marked than that of her body." When the extract was increased to ten drops three times daily, it produced a feeling of exhaustion, with pulse of over 100 and temperature 99.5°. The dose was then reduced to eight drops three times daily, and was held at that point for a month.—This is equivalent to one-half gland daily.

Doctor Shattuck, of Boston, remarks: "In using thyroid extract we are dealing with a powerful agent, and should be very careful until we are more familiar with its doses than we are at present."

It appears as if, in spite of the wrecks of the Brown-Séquard elixir, the animal extracts that end in *ine*, and the tuberculin of Koch, etc., at last an organic extract has been found possessed of real therapeutic efficacy.—*Therapeutic Review.*

Normal Liquid Cannabis Indica in Unpleasant Dreams.—Doctor R. T. Edes, in the Boston Medical and Surgical Journal, especially recommends Cannabis Indica for the relief of unpleasant dreams, transforming them into those of a more agreeable character.

"The drug should not be given in so-called 'full doses,' that is, not sufficiently large to produce effects obvious to anyone but the patient, and he hardly should be sure of it. For example, if experiments have shown that ten drops of the preparation to be used gives rise, in the average person, to some excitement, rapid talking, laughter, double consciousness, etc., let the dose for the purpose we are considering be, say, six or seven. I have found that a very convenient plan of administration, admitting of varying the dosage, is an alcoholic extract, which may then be dropped in the desired quantity upon a spoonful of granulated sugar.

"I have frequently had occasion to prescribe Cannabis Indica, and have found Parke, Davis & Co.'s Normal Liquid always efficient in doses of ten to forty minims. It would undoubtedly give satisfaction in cases like the above-mentioned, where the dreams are known to be habitual and not due to the 'traditional mince pie' or disordered digestion."

Damiana Therapeutics.—The therapeutics of Damiana have progressed beyond the empirical stage to a point where the drug can be prescribed with something like scientific accuracy. In action it is analogous to strychnine on the heart, and more tonic than cascara upon the bowels; it tends to increase peristalsis, and cause one or two soft stools per day; hence it is an effective remedy in the habitual constipation of neurotic subjects, especially those who are victims of sexual perversion. Increased diuresis follows its use, and many cases of irritable bladder and urethra are very greatly benefited. On the whole it acts as a tonic sedative equal, in

some cases of functional disturbance, to *Cactus grandiflorus*.

From the above *résumé* it is plain why Damiana has proved so efficacious in cases of nerve exhaustion resulting from sexual excesses, and why, far from being a direct stimulant of erotic desire, it has been found to act as a sedative to abnormal sexual appetite. In short, it is not a "specific," and its so-called specific action is but the result of its general tonic effect.—*Cleveland Medical Journal.*

Uses of Sumbul.—Sumbul, or musk-root, is an excellent antispasmodic and nerve tonic, in action resembling musk and valerian. In small doses it stimulates appetite, improves digestion, allays irregular nerve action; it is beneficial in depressed or excitable conditions of the nervous system. It may very advantageously be employed in the treatment of hysteria, neurasthenia, neuralgia, functional irregularity of the heart, restlessness, the insomnia of chronic alcoholism, and nervous dyspepsia. As most of these disorders occur in neurotic individuals—especially women with impaired nutrition, a morbidly sensitive organization, dyspeptic difficulties, and sluggish movement of the bowels, in many instances it may be associated with nervine and laxative remedies. The dose of the fluid extract is from five to thirty minims. —*The Medical Reporter* (India).

Elaterium.—Has any one tried the small dose of Elaterium? Prof. King treated cystitis by Elaterium, and I have had most marked benefit from it. He ordered a tincture prepared from one drachm of elaterium, and one pint of alcohol 76 per cent.; of this, half a teaspoonful to one tablespoonful was given three times a day until it acted freely upon the bowels; afterward eight to ten drops every three hours until the patient was relieved. The action of this tincture on the pelvic organs is decided. A preparation of ten drops of tincture in four ounces of water, in teaspoonful doses is a good remedy to try in irritation of the bladder, renal irritation, dysuria, in uterine and vaginal irritation, and irritation of the rectum. The field of experimentation is quite broad.—*Eclectic Medical Journal.*

Kola.—In an official report on the botany of Sierra Leone (Medical Times and Hospital Gazette) Mr. C. F. Elliott declares one Kola nut, or even a half nut, will enable a man to go without food and support great fatigue for twenty four hours or more. It is an excellent nerve tonic, and is especially desirable for keeping the brain clear and active at night; it, however, prevents sleep almost too thoroughly, and should not be taken less than four hours before retiring.

Another property not understood is, that of rapidly clearing foul water and impure beer. It is also said to remove immediately and thoroughly the unsteadiness and stupidity due to drunkenness.

Normal Liquid Belladonna.—In scarlet fever and measles, where the rash does not come out well, full doses of Normal Liquid Belladonna will generally give relief. The same remedy administered every three hours, in two- or three-drop doses, when the secretions are excessive, wonderfully relieves whooping-cough and bronchitis. No remedy is so satisfactory in the ptyalism of pregnancy. So, too, full doses frequently give relief in congestive headaches, but headaches from anæmia are made worse.—*Times and Register.*

Thymol as a Vermifuge.—Doctor Calderone, of Messina, considers Thymol, in doses of ten to thirty grains distributed over the twenty-four hours, as an efficient remedy for lumbricoids. No danger attends the administration of the drug; in fact, Professor Bozzolo, of the Faculty of Turin, has given as much as 150 grains in the same space of time for the expulsion of *ankylostomum duodenale*, without untoward effect. A solution of Thymol administered per rectum is often effective in relieving the lower bowel from *oxyuris vermicularis.*

Prophylaxis of Trachoma.—Doctor Hoor, of Hungary, insists upon rigid isolation of all cases of trachoma. He remarks: "Whole communities of young men are sometimes suddenly attacked and the eyesight destroyed before proper precautions are even thought of. During isolation the individual should be provided with his own utensils, clothing, towels, and brushes; no communication should be allowed with outsiders." He is convinced that trachoma among the troops is an index of hygienic defects in the barracks.—*Vratch.*

Caffeine-Chloral.—Chloral possesses the well known property of most aldehyds of combining with feebly basic compounds, such as formamid, urea, cyanogen, etc. It does so with caffeine. The compound so formed appears to be very useful in relieving constipation. The compound occurs in colorless tables, easily soluble in water. Professor

Ewald, of Berlin, has used it in hypodermatic solution, in doses of three to four grains given two or three times a day.—*Journal de Pharmacie d' Anvers.*

Indigestion with Gastro-Intestinal Catarrh.—Doctor J. Lewis Smith recommends the following:

℞ Dilute muriate acid, ½ drachm.
Pepsin (aseptic), 2 drachms.
Bismuth subcarbonate, 4 drachms.
Simple syrup, 1 ounce.
Distilled water, 6 ounces.

A teaspoonful of this mixture to be given before each meal.

Removing Odor from Hands.—A paste of ground mustard and water is a first-rate agent for removing traces of disagreeable smelling substances from the hands, such as salts of valerianic acid, cod-liver oil, etc. Huber claims that any oily seeds when powdered will answer this purpose. The smell of carbolic acid may be removed by rubbing with dampened flaxseed meal.—*Exchange.*

Mosquera's Beef Meal.—I believe that Mosquera's Beef Meal is the only true nitrogenous food upon which anyone can place confidence at the present date, for in it one has the elements of nutrition which are found in meat, and not in extracted paste of the salines only.—Doctor R. Cowan Lees, Glasgow Scotland.

For Chronic Constipation.—

℞ Extract colocynth compound, 3 grains.
Extract nux vomica (assayed), ½ grain.
Extract belladonna (assayed), ¼ grain.
Powdered white Castile soap, ¼ grain.
Water sufficient to form mass.

Make into two pills. One or two to be taken at night; another in the morning if required.

—*Stockwell.*

Bromide Eruptions.—These, and the tendency to digestive disturbances where large doses must be given, according to Fèrè, are counteracted by 1 drachm of beta naphthol and ½ drachm of salicylate of bismuth, daily. He finds this can be administered for months together without injury.

Hydrastinine Hydrochlorate.—This is yet a comparatively new derivative of *Hydrastis Canadensis*, but has achieved so favorable a record that it is now authoritatively urged as a reliable substitute for ergot in controlling hæmorrhages, and its official adoption was fully warranted.—*New Remedies.*

Threatened Abortion.—In threatened abortion, and in amenorrhœa, there is no remedy so satisfactory as Liquor Sedans. When Liquor Sedans and Saw Palmetto are combined in respective proportions of three and one, the results obtained in dysmenorrhœa are magical.

Ovarian Neuralgia.—

Normal liquid digitalis, 18 minims.
Normal liquid gelsemium, 15 minims.
Sodium bromide, 240 grains.
Water, 6 ounces.

Dose: Tablespoonful every three hours.

For Hæmoptysis.—

℞ Quininæ hydrochloratis, } ää gr. j.
Pulveris digitalis, }
Pulveris opii, gr. ss.

Misce et fiat pilula. Dose: One to be taken every six hours.

—*The Practitioner* (London).

Varicose Veins.—Professor Hobart A. Hare says distilled extract of Hamamelis, either taken internally or injected into the parts affected, has been found very valuable in relieving suffering from varicose veins.—*Medical World.*

Antinervine.—This new "headache remedy" on analysis was discovered to be merely a mechanical mixture of 50 per cent. acetanilid, 25 per cent. salicylic acid, and 25 per cent. bromide of ammonium.—*Exchange.*

Syrup Iron Chloride in Diphtheria.—In diphtheria give it on a full stomach and it will be absorbed. I use whiskey too, and give every hour, but depend chiefly upon the iron.—Doctor H. J. Tytler.

Saw Palmetto.—This drug has proved extraordinarily curative in prostatitis and all vesical and urethral irritations of any kind. It is also advantageously employed in dysmenorrhœa.

Jambul in Diabetes.—This drug caused lessening of the sugar and bettering of the general health, particularly in those cases intractable to diet.—*L' Union Médicale.*

Treatment of Climacteric Menorrhagias.—These are much diminished by a faithfully carried out Hydrastinine treatment.—*Atlanta Medical and Surgical Journal.*

To Abort Furuncles.—A recent French author claims that boric acid ingested in five-grain doses three times daily will abort boils.

Medical Progress.

The Greatest Heritage—An Honored Name.—After something like thirty years of forgetfulness, the great medical public again is called to consider the personal and professional attributes of Dr. Wm. A. Hammond, who has become involved in another unsavory quarrel. It would seem to an unbiassed observer that the accumulation of an extra million of dollars would hardly repay a man for undergoing the castigation to which the American Lancet has recently subjected the Doctor. And then, when we recollect that after this life comes—"the eye of the needle!"

So far as the general profession is concerned, we do not believe that very many have been humbugged, but our grievance is as much against Frank P. Foster, of the New York Medical Journal, as any one else. We have a right to expect from such a journal and such an editor the professional fair play that will protect the profession from "fake" scientific articles, or if published by any oversight, we have a right to an apology. Instead, we find the columns of that journal being used in an attempt to divert criticism by assailing the character of Mr. Ernest Hart.

Shame on you, Dr. Frank P. Foster! Shame on you, Dr. William A. Hammond! Be men. You have put your foot in it, and every one knows it. Make an open acknowledgment of error—a free and frank apology, and try to regain the esteem of your fellow-men, instead of endeavoring to divert attention by "calling the kettle black."

The editors of the Denver Medical Times owe to their readers and to themselves the duty of stating publicly that they received from some unknown source type-written copies of Dr. Hammond's original articles on "Animal Extracts" and on "A New System of Ventilation," before either article had appeared in the New York Medical Journal, and that after perusing them and detecting their actuating motives we consigned them to their proper destination—the waste-basket.—*Denver Medical Times.*

How to Treat Cocaine Poisoning.—The first duty is to prevent syncope, afterward to combat respiratory and cardiac collapse. The therapeutic means of doing this are unfortunately very few. At the very beginning, place the patient in a perfectly horizontal position, which will diminish the force of the syncopal condition. Sprinkle ice-water over the face, and to prevent convulsions envelop the body in cloths wrung out of cold water. If asphyxia threatens, practice flagellations with wet towels, massage, artificial respiration. Against tetanization of the respiratory muscles give inhalations of chloroform. Where there is great pallor, provoke vasodilatation, modify the arterial pressure, and diminish the encumberment of the central circulation, by the administration of amyl nitrite (by inhalation).

If these means prove ineffectual, and deglutition is impossible, give hypodermatic injections of caffeine and of sulphuric ether (15, 30, even 45 minims). Bend all efforts toward moderation of reflex excitability of the nervous system, sustaining the heart, and reëstablishing the equilibrium of the blood-pressure. The treatment of acute cocaine-intoxication is particularly and above all a case for arterial medication.

Commenting on the foregoing, M. Choupe (Bulletin Médical) counsels in addition, the use of hypodermatic injections of morphine, but given only at the very outset, and sufficiently large to produce the physiological effects of the drug—say from one-half to five-eighths of a grain.—Chas. Elroy, in *Revue de Clinique.*

Kerosene-Oil Poisoning.—A retired officer, in a fit of temporary mania, swallowed half a bottle of kerosene oil, and immediately afterwards, finding the effects of the oil too depressing, took two ounces of *sal volatile.* On seeing the patient two hours after the accident, I found him collapsed; his lips blue; face generally cyanosed; pupils dilated; complained of great difficulty in swallowing. Under his bed lay a good deal of blood which he had both vomited and coughed up. From the severe vomiting, I judged that very little oil had remained in his stomach, and therefore did not give him an emetic. As there is no recognized antidote for kerosene, I treated on rational principles, allaying the extreme sickness by bismuth and soda, and warmth to the body. For some days the dysphagia continued, with rawness of the throat. He occasionally vomited the nourishment given him, but with the addition of a little opium these symptoms subsided. There was no diarrhœa at any time. The kidneys were probably congested for a week afterwards, the urine being passed in very small quantities. He did not quite recover for a month later, but he seems now to have entirely regained his health and strength. For the dysphagia I used cocaine lozenges with great benefit.—John Morton, in *Indian Medical Record.*

PARESIS AS A SEQUEL OF REMITTENT FEVER.—In the Chatarpur Hospital, during the past three years, I have treated numerous cases of remittent fever occurring in the months of June, July, and August. I have been much struck with sequelæ in the form of hemiplegia and paraplegia occurring in many of these cases. It is remarkable that these pareses take place *after* the abatement of fever, and almost at the termination of convalescence. They are more frequent in children than in adults, and the prognosis is more unfavorable in the former than in the latter. It is also remarkable that though these forms of paralysis are more fatal in children, those that recover among children regain the use of their limbs much sooner than adults who recover—*i.e.*, recovery is more rapid in children.

The treatment adopted is Easton's Syrup with Damiana internally, and faradism and massage externally. The duration of the paresis varies from ten to forty days or more. In no other district have I noticed paralysis as a sequel to remittent fever, and perhaps my professional brethren in other parts of India will record their experiences of pyrexial sequelæ.—Balagopal, L. M. S., in *Indian Medical Record.*

GRAVIDITY OF ELEVEN MONTHS' DURATION.—Bensinger (Centralblatt für Gynäkologie) reports the case of a woman, 27 years old, who had borne two children, six and two years before respectively, after normal pregnancies, without artificial interference and with an uncomplicated puerperium. In May, 1892, she aborted in the second or third month of pregnancy. She menstruated in the week from August 10th to 15th. Early in September she noticed signs of pregnancy, and her opinion was confirmed by the attending physician. According to her calculation the pregnancy should have terminated toward the close of May, but it was not until the 12th of July, after a gravidity of eleven months, that labor set in, and was readily terminated without interference. On account of a previous rupture of the perineum, the head encountered no obstruction, but the passage of the shoulders occasioned some difficulty. The placenta was large, the amniotic liquor scanty. The child was twenty-three inches long and weighed more than thirteen pounds, and in all other dimensions corresponded to the prolonged duration of the gestation.

ACCIDENTS WITH TINCTURE OF IODINE.—Guermonprez recently made an extensive application of iodine tincture upon the chest of a patient suffering from a pulmonary disease; it ought to be added that he was in quite a large room. Soon after the remedy was applied, the patient, the physician and his assistants, who were at some distance from the sick-bed, were all suddenly seized with dyspnœa, suffocation, lachrymative conjunctivitis, rhinitis, etc., in fact there was a general irritation of all the mucous membranes, the patient himself suffering severely. It was necessary to open all the windows of the apartment, when the disturbing features all vanished. The iodine had been prepared with a bad alcohol, which was a mixture of both the ethylic and methylic grades.

Augier has seen similar unpleasant occurrences in a children's hospital, where the iodine had been prepared with wood alcohol for reasons of economy.—*Journal de Pharmacie de Lille.*

FOREIGN BODIES IN THE AIR PASSAGES.—Mr. Bernard Pitts, in an address to the Royal College of Surgeons, points out that a small smooth body, especially if it be heavy, is more prone to descend into one of the bronchial tubes than an uneven light body, which is likely to remain in the trachea. When a foreign body is lodged in the trachea, there are usually signs of its presence on auscultation, and the recurrent attacks of dyspnœa, as the body changes its position, are very charcteristic. The tendency of a foreign substance to pass into the right rather than the left bronchus, is generally explained by the fact the septum at the bifurcation is to the left of the middle line. Mr. Pitts thinks it is probable foreign bodies find their way into the left bronchus much more often than is generally surmised. There appears to be a good deal of difference of opinion as to which bronchus has the preference.

THE PHYSIOLOGICAL ACTION OF OXYGEN.—Dr. J. L. Kerr communicates to the Lancet (London) the experiments of self and friend in the inhalation of this gas. Both were in perfect health, and therefore the observations must not necessarily be supposed to be the same as in a state of disease. The inhalations were taken by deep respirations, in a confined space, so as to breathe as little natural air as possible. There was no flushing of the face, feeling of quickened vitality, or exhilaration; no accelerated pulse, and no rise in temperature; the only positive result observed was a distinct diminution in the frequency of respiration—the *besoin de respirer* was entirely abolished for the time being,—the intervals

between respirations were greatly increased, and there was a feeling that there was no urgency to repeat the act of breathing.

THE ACTION OF ALCOHOL.—Gutenkorn says, internal administration diminishes blood-pressure, as a result of dilatation of the arterioles, and not because of any diminution of the force of the heart—if the latter were the case a damming up of blood would take place in the left auricle, with consequent increased blood-pressure there; but the very opposite takes place, as the ventricle contracts more vigorously and drains the auricle of its contained blood. Alcohol also acts as an analeptic—at the same time producing diminishing blood-pressure from diminished excitation of the vaso-motor centres. The greatest amount of arterial dilatation takes place in the pelvic region. The diminished blood-pressure resulting from the cutting of the splanchnic nerve is not increased by the administration of alcohol. Irritation of the nerve increases the blood-pressure after it has been lessened by the administration of alcohol. It has no deleterious effect either on the vaso-motor nerves or on the vagus.—*Canadian Practitioner.*

A NEW METHOD OF REDUCING DISLOCATION OF THE JAW.—Doctor Roth seats the patient in an ordinary chair, and stands before him with one foot placed slightly to the right side and the other just in front of the patient and in the middle line. He then flexes himself at the hips and causes the patient to lean forward and to place his forehead at the middle of the operator's sternum—but this position varies with the size of the patient's head. The operator now flexes his neck so that his chin grips the patient's head about the upper part of the occipital bone, thus acquiring a firm hold with the head well under control between his chin and chest. Now the thumbs, protected in the usual manner, are placed in the patient's mouth, and the fingers of both hands grasp the lower jaw.

VALUE OF THE GONOCOCCUS.—Neisser found a micro-organism in gonorrhœal pus in 1879, and called it *micrococcus gonorrhœa*. His observations were confirmed by a large number of observers. Other investigators find the same organism in pus from acute abscess, and likewise in normal human saliva, and do not believe the gonoccocus is to be distinguished pathologically from other micro-organisms. Moreover, urethritis has been induced by injections of ammonia when the same identical microbe was found, and as definitely as in a clear case of contagion. The probability is, then, that the gonoccoci are always present in the human body or its secretions.—Doctor J. E. Minney, in *Kansas Medical Journal.*

VENOUS MURMUR IN CIRRHOSIS OF THE LIVER.—Martini reports three cases of atrophic cirrhosis of the liver in which there was a constant blowing murmur to be heard in the sixth intercostal space in the right axillary line; the murmur was always increased during inspiration, but in one case diminished after an attack of hæmatemesis. The cause seemed to be in the altered position of the ascending vena cava, which was crowded against its opening in the diaphragm by the contracted liver and the ascites, causing a venous eddy at the point of obstruction. In one case which came to autopsy there was a distension of the vein below the opening.—*Gazzetta Degli Ospitali.*

VOMITING OF ANÆSTHESIA.—Vomiting during anæsthesia may be arrested by compression of the phrenic nerve and vagus. Doctor Joos, of the Cantonal Hospital at Winterthur, applies compression of the thumb on the left side, immediately above the sternal end of the clavicle; the hand is held flat on the thorax, and the thumb is parallel with the clavicle. In his experience the emesis and hiccough forthwith cease. He also suggests that this treatment might be useful for relief of sea-sickness.—*Medical and Surgical Reporter.*

HORSE-HAIR IN MINOR SURGERY.—Doctor Thompson claims the following advantages for horse-hair sutures: They are easily obtained and inexpensive; are soft, pliable, elastic, aseptic, non-absorbent, non-irritant, and hold the knot well; can be employed with a very small needle, and make no shoulder at the eye; are more easily removed than any other without pain or injury to the tissues; finally, can be employed for drainage.

DIAGNOSIS OF EPILEPSY BY THE URINE.—Gilles de la Tourrette claims that a diagnosis between hysterical epilepsy and that due to neoplasm can be made by examination of the urine. He claims there is an increase in the elimination of urea and phosphates during a convulsion due to a tumor, while the amounts excreted during an attack of hysterical epilepsy are diminished.—*Medical and Surgical Reporter.*

Publisher's Department.

I believe that Mosquera's Beef Meal is the only true nitrogenous food upon which anyone can place confidence at the present date, for in it one has the elements of nutrition which are found in meat, and not an extracted paste of the salines only.—*Doctor R. Cowan Lees, Glasgow, Scotland.*

The Youth: And what shall I do to have my fellow-men speak well of me?
The Sage: Die.—*Indianapolis Journal.*

For the better accommodation of our patrons, we have opened a dépôt in Chicago, where will be carried the largest and most complete stock of Soluble Tablets, Triturates, etc., west of Philadelphia. H. K. Mulford Co., 112 Dearborn street.

"How many foreign languages can your wife speak?"
"Three. French, German, and the one she talks to the baby."—*Inter-Ocean.*

The tired professional and literary men will find nothing so soothing and refreshing as Horsford's Acid Phosphate. This is the testimony of thousands of these classes of men.

They served us at our boarding-house
With "lamb" to-day; egad!
I'm sure it was a portion of
The one that Mary had.

—*Yonkers Gazette.*

The results obtained from Bromidia have been excellent. It combines all advantages of other hypnotic preparations without their disadvantages. The fact that it produces no unpleasant sensation on awaking renders it specially valuable.—*Chicago Medical Standard*, November, 1893.

Mr. Newlywed: This photograph of you was taken by the instantaneous process, wasn't it?
Mrs. Newlywed: Yes, of course.
Mr. Newlywed: That's what I thought. Your mouth is shut in the picture.—*Texas Siftings.*

EUREKA SPRINGS, ARK., Oct. 9th, 1893.

DIOS CHEMICAL CO., St. Louis, Mo.:

Gentlemen:—The sample of Sennine you sent me came safely to hand, and I happened to have some cases that visited my office daily for treatment. In two cases of eczema covering the inner side of the thigh I applied the Sennine just as I received it from you—that is, full strength, dry—and I am happy to say it acted like a charm in both cases. Again I applied Sennine to venereal ulcer, and must say that it did all any one could ask. I look upon Sennine as the antiseptic of all others, and shall continue its use in my practice. W. R. HARDESTY, M.D.

"What a pretty dimple that boy has," said a lady while visiting a doctor's family, as she patted the hopeful on the head. To which the infant replied: "You think that is a pretty dimple? Well, you dess ought to see the one on my stommick."—*Ex.*

Doctor Lutz has employed Salophen in cases where previously he had been accustomed to use salicylic acid or salol, phenacetin, antipyrin, antifebrin, caffeine. Seventeen patients suffering from muscular pains in various parts of the body were greatly relieved. The remedy was given in gramme doses three times daily, and later in much larger doses (two to three grammes). No disturbances of the digestive tract were observed after single doses as large as six grammes. The symptoms sometimes following the administration of salicylate of soda, such as tinnitus aurium, headache, vertigo, etc., were never observed. After taking Salophen the patients usually experienced profuse sweating of variable duration. The remedy was also given in twenty cases of headache due to various causes, in doses of one to five grammes. In three cases no change was noted, while in seventeen the pains disappeared or were greatly ameliorated. The effect ensued in from half an hour to four hours.

First Little Girl: We went to the picnic and you wasn't even invited.
Second Little Girl: No, but mamma gave me a whole lot of money to buy candy and cake and ice-cream and lemonade for myself, and I'll bet I was sicker'n you were.—*Good News.*

D. M. Bloom, M.D., New Waterford, Ohio, says: "I have prescribed Aletris Cordial in the case of a young lady who had suffered from severe dysmenorrhœa for a number of years. During this time she had been treated by a number of physicians, using almost every known remedy, without receiving any benefit. I prescribed Aletris Cordial, teaspoouful doses three times a day, with the most satisfactory results. She now passes over her monthly periods entirely free from pain. I have used it since in different cases of dysmenorrhœa with the same pleasing results. I have also prescribed it in a case of prolapsus uteri, where there were present hysterical manifestations. Gave Aletris Cordial and Celerina, equal parts, dessertspoonful three times a day, with excellent results. I can heartily recommend it to the profession as one of our most efficient uterine tonics."

Chicago Bootblack: See de old hulks wid de eyeglasses? Watch me fetch him. (Raising his voice.) Dazzling brilliancy imparted to pedal covertures for a reasonable pecuniary compensation while you linger!

The Old Hulks (from Boston): Here, boy.—*Chicago Tribune.*

ST. LOUIS, Oct. 14th, 1893.

KATHARMON CHEMICAL CO., City:

Gentlemen:—It affords me pleasure to report favorable results from the use of "Hagee's Cordial of Cod-Liver Oil" in a case of faulty nutrition with a tendency to phthisis pulmonalis. The patient had been under my treatment for several weeks without showing any marked improvement, when I decided to test the merits of the above preparation, believing cod-liver oil in this form was indicated. The improvement from its use was so sudden and substantial that in ten days the patient returned to his usual occupation, rendering further treatment unnecessary. Very respectfully, your obedient servant, S. C. MARTIN, M.D.,

Professor of Dermatology and Hygiene,
Barnes Medical College.

"I never robbed a man but once," said the honest tramp, "and then I was starving. He would not give me a penny, and I couldn't stand the gnawings of hunger any longer. So I knocked him down and went through his pockets. What kind of a haul did I make? Just one little bottle what read on the label: 'Pepsin, for that full feeling after eating.'"—*Judge.*

Every physician should send to the Malted Milk Co., Racine, Wis., for one of their new and useful Desk Tools, a ruler, measure, and paper-cutter combined. They are sent free and postpaid to any physician on application. Liberal samples of Horlick's Malted Milk will be sent also to physicians who wish to give this food a trial in their practice. It is an excellent preparation for use as a diet in typhoid fever and all wasting diseases, for debilitated conditions and digestive troubles, affording as it does all the elements of nutrition in a concentrated yet very pleasant and easily assimilated form.

Patient: As we have known each other so long, Doctor, I do not intend to insult you by paying your bill. But I have left you a handsome legacy in my will.

Physician: Very kind of you, I am sure.—Allow me to look at that prescription again. There is a slight alteration I should like to make in it.—*New York Medical Times.*

Prof. Lister, father of antiseptic surgery, after thoroughly trying all of the known antiseptics, has returned to carbolic acid as the only true antiseptic; which makes it evident that the Phenique preparations prepared by the Phenique Chemical Co. of St. Louis are without a rival in surgery, each possessing its own peculiar field and advantages, and being free from the rank and objectionable odor of the natural acids.

Irate Parent: It's over an hour since I sent you to the store to get those things, and now you have come back without them!

Small Boy: It was such a long time before my turn came to be waited on that I forgot what you wanted.

Irate Parent: Why didn't you come home to find out?

Small Boy: 'Fraid I'd lose my turn.—*Harper's Bazar.*

Extract of Malt is no longer an official preparation—at least it will very soon not be, as it is one of the dismissed articles from the Seventh Decennial Revision of the U. S. Pharmacopœia. Why this is "thusly," when it is an article of so much therapeutic value and so largely used, it is not within our province to say. It looks to us as if the Revising Committee were either perfectly satisfied with the quality of the present commercial supplies, or that they despaired of describing or defining the product in such a way as to permit of easily-applied tests for limitation and verification of the standard by the ordinary druggist. If the former supposition be the correct one, we surmise that Parke, Davis & Co.'s Extract of Malt was one of the brands on the market that they found to respond to every test, both as to diastatic strength and palatability. There are extracts of malt which will scarcely effect the conversion of starch, but these we need scarcely say are worthless in the treatment of carbohydrate indigestion, although they may in palatability be perfectly acceptable. It is almost out of place to speak here of the many uses to which a good extract of malt may be put, but probably the most frequent occasion is in handling cases of ovarian troubles, with the very common indigestion accompanying, that of the starchy foods in particular. Extract of Malt (P. D. & Co.) will prove itself an efficient agent wherever the natural fluids are showing themselves to be unable to accomplish starch conversion, and its present high standard of activity in this direction may be depended upon even after the official guardianship of the Pharmacopœia is dissolved.

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Original Articles.

THE TROPHO-NEUROTIC ELEMENT IN SOME OF THE PHENOMENA AND SEQUELÆ OF SYPH LIS, WITH ESPECIAL REFERENCE TO HERPES PROGENITALIS.

BY G. FRANK LYDSTON, M.D.

Some ten years ago, in a lecture delivered at the College of Physicians and Surgeons, I ventured to dwell upon the influence of tropho-neurotic disturbances as a factor in the phenomena of syphilis; later (1889) I also presented in the Transactions of the Southern Surgical and Gynæcological Association a paper upon this subject. Here and there in the writings of Fournier, allusions are made to the important rôle which the nervous system plays in the phenomena of syphilis. A more or less permanent disturbance of the nutritive functions of the nervous system is, to my mind, the most important factor in the incurable cases of this affection. It explains why our anti-syphilitic remedies are in so many instances either entirely inert or only partially successful in correcting symptoms in which the pathological condition, whatever it may be, was undoubtedly primarily brought about by syphilis. This is a matter worthy of the most thoughtful consideration. We are inclined to rely, in some instances, a little too confidently upon what has been supposed to be the crucial diagnostic test of syphilitic lesions, namely: The administration of mercury and iodide of potassium. We often find cases in which these apparently have the effect of rendering the pathological conditions very much worse. In other instances, after having subtracted a certain element of undoubted syphilis which exists, we are brought face to face with conditions and symptoms over which anti-syphilitic remedies have absolutely no effect. It is well to remember that syphilis may produce disturbances of nutrition both general and local, that may remain long after the syphilis itself has been subtracted either by a spontaneous cure of the pathological process, or under the influence of anti-syphilitic treatment. It is by no means unusual in cases in which syphilis is entirely at the bottom of pathological phenomena to see the condition grow much worse under the influence of our remedies. Here again, we are apt to be led into a diagnostic error, or are liable to increase doses beyond reasonable limits, in the vain attempt to stamp out syphilis which perhaps no longer exists. There are certain lesions occurring in syphilitics which bear the same relation to the original disease that the dead ruins of a building bear to the fire which produced them. We are also too often inclined to forget the personal equation, and this is especially apt to be the case with certain sequelæ of the disease.

Without going into details regarding the relation of tropho-neurotic disturbance to the various phenomena of syphilis, it may be stated in a general way that I believe a number, if not most, of the lesions of syphilis are due, not to a poison, germ, or germ product acting upon tissues directly affected, but to some toxic influence acting upon the trophic functions of the nervous supply of the parts affected. I believe, for example, that the roseola of syphilis is due to a pseudo-alkaloidal poison or poisons developed by bacteria, that I confidently believe will ere long be positively demonstrated. The alopecia of active syphilis has appeared to me to be due to a local disturbance of trophic innervation rather than to an accumulation of syphilized germinal material in and about the hair follicles producing mechanical impairment of nutrition; with reference to this point it will be remembered that traumatism occasionally causes alopecia areata, probably by an impression upon the sympathetic nerve supply. Leloir, Dumesnil and others have reported cases of this kind, and Joseph's experiments are quite significant.—The latter divided the spinal ganglion of the second

cervical nerve in cats, and thereby produced baldness. Many of the late bone lesions of syphilis I believe to be due to a trophoneurosis; this has seemed to me especially true of certain of such lesions occurring about the face and jaws. Many of the lesions of the mucous membrane of the mouth occurring in late syphilis are dependent not upon the syphilis *per se*, but upon the local depravity of tissue nutrition produced by syphilis, and by its treatment, in about equal proportions.

It has been my observation that quite a proportion of patients who have had syphilis at a period more or less remote, and who previous to its acquirement never had any genital lesion, are prone to recurrent attacks of herpes progenitalis. I find in many cases that the patient will get along with so little disturbance as to have absolutely no cause of complaint, save the development from time to time of a herpetic eruption upon the penis. I have seen this so often that I believe I am warranted in the assertion that herpes progentalis of a non-specific character may be produced by syphilis; and the production of this disease I believe to be dependent upon a local tropho-neurosis. It will be remembered we often find in patients who have never had syphilis cases of herpes progenitalis in which a local disturbance of innervation is the only possible explanation of the affection. We find recurrent crops of herpes produced by local nervous disturbance in women as well as in men. A very excellent illustration in women is that peculiar form of herpes that comes on during the menstrual epoch or during pregnancy. I have observed in certain cases of stricture in which there has not been sufficient discharge to account for the local irritation, the development of herpetic vesicles from time to time which entirely disappeared after the urethral canal had been restored to its normal condition.

A very familiar illustration of the relation of skin eruption to nervous disturbance of a presumably trophic character is found in herpes zoster; recurrent herpes zoster is especially pertinent to the question of trophoneurosis. In the Medical News, in 1890, I claimed herpes progenitalis is often the result of syphilis, being moreover a pure neurosis, which is due to syphilis, to worry, to disturbed sexual physiology, to over-active therapeusis. To these causes I will add another, namely, local disturbance of nutrition incidental to an impression made upon the nerve, lymphatic, and vascular supply of the tissues by the primary induration.

To cite a large number of cases illustrative of the correctness of the view that syphilis bears a direct causal relation to genital herpes of a non-specific character, would be tedious and necessarily monotonous; but I may, however, relate a few cases.

Case 1.—A gentleman under my care off and on for a number of years, but never with any venereal trouble, contracted syphilis that ran a comparatively mild course and gave very little annoyance. About the end of the first year of the disease the patient presented himself with a patch of herpetic vesicles upon the prepuce; he consulted me with the idea that he was experiencing a return of his old trouble. Careful examination failed to detect any evidence of syphilis about the patient. The usual topical applications and instructions regarding cleanliness were carried out, but with only temporary benefit. The herpes in this case recurred off and on without appreciable exciting cause for nearly two years, after which it subsided spontaneously.

Case 2.—A woman, 28 years of age, who never had experienced any previous venereal of gynæc disorder, was under my care for syphilis for about six months. She developed at this time a very stubborn attack of herpes progenitalis. There seemed to be no local irritation to account for the disease, as the patient was remarkably free from the disturbance to which women are ordinarily subject. The herpes in this case persisted for about a year and finally disappeared, treatment apparently having had only a temporary effect.

Case 3.—A gentleman whom I had treated eighteen months previously for syphilis, consulted me for what I believed to be a recurrent attack of chancre. He had no gonorrhœa, had not been exposed to venereal infection of any kind, but presented a very marked development of herpetic vesicles upon the penis and scrotum, there being considerable inflammatory swelling in conjunction therewith. It was fully a month before the disease began to subside, there having been meantime successive crops of vesicles with attendant inflammation. The herpes in this case occurred at intervals of about a month or six weeks for the better part of a year. As the patient was very apprehensive of the

syphilitic character of his trouble, I unwillingly placed him upon anti-syphilitic treatment on several occasions, with the result that his herpes became considerably aggravated.

Case 4.—A gentleman, who had been under treatment for syphilis for six months, developed several small patches of herpes upon the glans penis, that proved quite rebellious to treatment, it being something like three months before the attack finally subsided. During the course of the lesions considerable ulceration had occurred. Internal medication, both tonic and specific, seemed to have no special effect. Within a month after the subsidence of the first attack the herpes recurred, but in less violent form. This gentleman, still under observation, is still annoyed from time to time by a recurrence of the herpes.

Case 5.—This gentleman has been under my care quite constantly for over a year, during which time he had been methodically treated for syphilis. Like the preceding case, he had never had any genital trouble with the exception of the herpes progenitalis for which he consulted me; he had not been exposed to infection of any kind for several months prior to the development of the herpes. Ulceration occurred, and the resulting lesion was not at all unlike a moderately severe chancroid. The substitution of tonic for the anti-syphilitic treatment proved quite efficacious. Patient, however, has been annoyed off and on by the recurrence of the herpes, although ulceration has not occurred as in the first attack.

I could enumerate case after case similar to these, but will content myself with the statement the foregoing are typical illustrations of a large number coming under observation in which those who never have had any local affection have been affected by herpes progenitalis during the course of an attack of syphilis or after its apparent cure. It is important to recognize this condition as being independent of syphilis proper, as it certainly is likely to cause considerable uneasiness and perhaps a lack of confidence on the part of the patient. The physician imbued with the idea that when once a patient has had syphilis every symptom experienced in the natural course of his after-life must necessarily be specific, may inflict great injury by over-medication of such lesions. The thought has occurred, in some of the cases which I have observed, that the treatment itself, although not over-vigorous, was the cause of the herpes progenitalis by producing general nutritive disturbance, which manifested itself in the genitals by a local hyperæsthesia. Such a local predisposition existing, comparatively slight causes in the way of direct irritation would naturally be sufficient to bring out the herpetic eruption. Over-medication certainly would add to the cachexia sometimes induced by the syphilis itself, and this not only favors the occurrence of herpes, but once it is established is very favorable to the occurrence of ulceration. The question may arise, whether the herpetic lesions of late syphilis are infectious? This is a query that must be answered later on.

Chicago, Ill.

PATHOLOGY AND TREATMENT OF JAUNDICE.

BY NARESH CHANDRA MITRA, M.A., M.B.

It is not my object to discuss the conflicting theories as to the pathology of this disease, desiring merely to expound the pathology by the light of modern research in as clear and concise a way as possible; and in order to do this thoroughly a knowledge of physiology is absolutely indispensable.

The liver is the largest glandular organ in the economy, situate in the right side of the abdominal cavity, its most important function being to secrete bile. It is supplied with blood by the hepatic artery and the portal vein—vessels which end in the capillaries, and from which arises the hepatic vein, which carries away the blood from the liver. The smallest obvious subdivisions of the liver substance are the lobules. Each lobule is a polygonal mass one-tenth of an inch in diameter, surrounded by a meshwork of the hepatic artery and the portal vein. The centre of a lobule is the beginning of the hepatic venous channels. The minute microscopic subdivisions of the liver are the liver cells, which occupy all the meshes of the blood-vessels in the lobules, and it is in these that the active powers of the liver are supposed to reside. The hepatic duct is the channel by which the bile is carried away from the liver, and on following it up the minutest branches will be found to commu-

nicate with the minute passages left by the hepatic cells, so that fine endothelial cells intervene between the hepatic cells, and the duct, and the vessels. The bile, passing by the hepatic duct, pours down into the duodenum while digestion is going on, otherwise it flows back into and fills the gall-bladder. The functions of the bile may be stated as follows:

Emulsification and consequent assimilation of fat:

Prevention of putrefaction in the fæcal matter of the intestines:

Natural purgative.

Jaundice is the yellow discoloration of the skin, conjunctivæ, and urine, owing to the presence of bile in the circulation. This presence of biliary secretion in the blood has led to the most important question, whether bile as such, or any constituents thereof, is ever present in the circulation—that is to say, whether the function of the liver is an excretory one, removing the deleterious products from the system, or whether it secretes the substance in its own cells. Doctor George Harley, whose name will always be honorably mentioned in connection with the pathology of diseases of the liver, was of the opinion that the coloring matter of the bile, *biliverdin*, existed in the liver, but that the biliary acids were formed in the cells. Recent researches, however, have completely exploded this theory; pigeons and geese were especially selected for this experiment owing to the peculiarity of the blood supply of their livers, which allows the circulation to be cut off without immediate fatality; results were that no trace of bile-pigments could be found in the blood after ligature of the vessels supplying the liver.

Jaundice has been classed as obstructive and non-obstructive. In obstructive jaundice the flow of bile has been stopped on its way to the duodenum, and being pent up finds exit into the circulation. Non-obstructive jaundice is sufficiently explained by its title.

In the first form the obstruction lies in the common bile-duct; it may be a gall stone, a plug of mucus, or simply due to catarrhal condition. The secretion, finding no outlet, accumulates behind the seat of obstruction, and as the accumulation and pressure become greater it is absorbed into the circulation. English pathologists hold that the retained bile, escaping through the walls of the minute bile-ducts, is absorbed by the branches of the hepatic vein and thence carried into the general circulation; the Germans, however, believe the bile is absorbed by the hepatic lymphatics and then finds its way through the instrumentality of the thoracic duct.* Without discussing these two theories it may be added that at the last annual meeting of the British Medical Association, Doctor Vaughan Harley read a paper on obstructive jaundice in which it was stated that after ligating both the thoracic and the common bile duct, no bile could be detected in the blood. The conclusions which he deduced from his experiments were:

The pent-up bile is absorbed by the lymphatics of the liver, and conveyed through the thoracic duct into the general circulation, and not into the blood capillaries as has hitherto been accepted:

The bile is not essential to the process of digestion, for animals whose bile-ducts have been ligatured not only lived, but thrived well and gained in weight.

As to non-obstructive jaundice, the hitherto accepted theory of hæmatogenetic origin of bile no longer holds; the recent doctrine does not recognize the question of non-obstruction as to the causation of the production of jaundice in this form, hence the term "toxæmic" has been proposed by Doctor William Hunter on the theory that this form of the malady is due solely to the action of certain poisons upon the liver cells. The pathology of this form has developed from study of the action of toluylenediamin upon the liver of certain animals, it having been demonstrated that under the action of this drug the biliary secretion becomes very thick and viscid, and its flow ceases, during which stage the jaundice becomes most pronounced. Thus, the action of toluylenediamin prompts the belief that jaundice is due to obstruction to free flow owing to a viscid condition of the bile, and its final absorption into the circulation. And so, during the course of certain diseases such as specific fevers, pyæmia, etc., poisons are generated which by their action upon the liver cells

* *Vide* Strumpell's Practice of Medicine.

(similar to that of toluylenediamin) produce a viscidity of the bile, obstructing its flow into the duodenum, and in consequence the secretion accumulates behind the seat of obstruction and is finally absorbed into the circulation. Absorption of retained bile in the duodenum, owing to constipation or some other cause, may originate this form of jaundice.

The distinguishing characters of these two forms of jaundice are, according to Dr. G. Harley, that bile-acids are only present in the urine in cases of *obstructive* jaundice, while bile-pigments are only found in the urine of *non-obstructive* cases. But his theory having been exploded, the distinctive characters pointed out by him can no longer hold ground. The only other point to distinguish these forms is by the character of the stools, which in the *obstructive* form are whitish or blackish in color, whereas in the other form they have a tinge of yellow in them. The former form is by itself a separate disease, but the latter supervenes during the course of some other maladies.

In the *non-obstructive* variety, hepatic stimulants are indicated, and later purgatives to hurry on the already accumulated bile from the duodenum. Among such may be mentioned nitro-muriatic acid, taraxacum, mercury, rhubarb, podophyllin, chloride of ammonium, and phosphate of soda. In the *obstructive* form, if the obstruction be slight, due for instance to catarrh of the bile-duct or a simple plug of mucus, hepatic stimulants such as rhubarb may be administered on the hydraulic principle of raising the pressure in the bile-duct by the accumulation of the retained bile, and so pushing over the obstruction downwards into the duodenum. Ipecac too is used for its action on the mucous membrane of the gall-bladder and the hepatic duct, and thus paves the way for the bile downwards into the duodenum. Calomel is administered to hurry on the collected bile in the duodenum, and thus prevent its absorption by the portal circulation, and re-absorption into the general circulation through the instrumentality of the hepatic lymphatics and thoracic duct. Sodium bicarbonate in a tumblerful of tepid water is very useful for its sedative action upon the liver, rendering the bile non-irritating by combining with it in the duodenum, and finally helping it onward in its course. Diuretics and diaphoretics are used to favor elimination of the bile by the kidneys and the skin, for if the absorption is greater than the elimination, there is an accumulation of the bile-elements in the blood, and these act deleteriously upon the nerve-cells of the brain, producing symptoms of *cholæmia*. Moreover, the bile-elements in the course of elimination by the kidneys may irritate the organs and produce congestion, so that the kidneys themselves, owing to their congested state, can no longer carry on the elimination of the bile in a satisfactory manner, and the result is that the primary function of the excretory organs remains in abeyance, and urea collects in the blood owing to defective elimination. Symptoms of uræmic as well as cholæmic poisoning may thus manifest themselves. Ultimately we are thrown upon the skin for any elimination of the dangerous materials in the blood. Of course, such a state of matters rarely takes place, but that these are not creations of an imaginary theory will be evident from the clinical history of one of the cases noted below. Sometimes it has happened that over-distension of the gall-bladder, owing to the accumulation of the bile from obstruction in the common bile-duct, paralyzes the muscular fibres of its walls, and this temporary paralysis renders the gall-bladder unable to empty itself. This mechanical paralysis may best be overcome by gentle manual pressure by the fingers over the region of the gall-bladder. But if there is reason to believe that there are gall-stones or other permanent formations obstructing the passage, hepatic sedatives are to be administered, and measures undertaken for the removal of such by operative procedures. Sulphate of soda, by its action upon the liver and stimulation of the intestinal canal, is sometimes very efficacious in this form of jaundice.

I wish to cite four cases illustrative of the types, and the treatment followed:

Case 1.—An elderly female of bilious temperament had an attack of fever attended with bilious vomiting, and pain of a colicky character in the right hypochondriac region. The conjunctivæ and the urine were jaundiced. There was slight fever, ranging from 100° to 102° F. The vomiting was very troublesome. Whatever was swallowed was brought up the

next moment. There was constipation and an unusual formation of gaseous products, which kept the abdomen quite distended and tympanitic. That this latter condition was due to the absence of bile in the intestinal tract, there is no doubt. Calomel, sodium phosphate, and euonymin were given in the form of pills, which moved the bowels slightly, the stools being whitish in appearance. The patient continued in this state for nearly a week without any abatement of the symptoms, but rather with some aggravation, as evidenced in the evening rise to above 103° F. Her friends being anxious, a consultation was held. Sodium bicarbonate with ammonium chloride, and pills of rhubarb and calomel, were ordered; at the same time turpentine fomentations over the abdomen, followed by the application of ext. belladonnæ and glycerin over the liver, and linseed-meal poultices; enemata of turpentine and tincture assafœtida were also given. This was continued for two days. Another consultation was held, and stimulation of the liver was no longer thought advisable. Magnesia sulphate in two-drachm doses every two hours, and a diaphoretic mixture of liquor ammonia acetatis with nitrous ether, were ordered. This produced many copious motions of a whitish color. As the temperature kept in the evening above 103° F., phenacetin in an eight-grain dose was given as often as the temperature rose above 103° F. On examination of the urine, albumen was detected, so it was thought inadvisable to administer any stimulant diuretics. The condition of the patient was becoming critical. She was found the next morning more or less drowsy, with marked dullness of sensibility and dilated pupils, lying in an apathetic state, not cognizant of external impressions. There was no doubt that the drowsiness and other symptoms were due to bile-poisoning, and, unless the skin could be made to act, the case was sure to end fatally; therefore, pilocarpine nitrate in one-tenth-grain doses every three hours was administered. In the afternoon she had a convulsive fit of the face and upper extremities, followed by temporary insensibility; this fit most probably was due to uræmic poisoning owing to defective action of the kidneys. The consulting physician was of opinion that in case the internal use of pilocarpine did not produce the desired effect, subcutaneous injection of pilocarpine nitrate of one-tenth grain must at once be resorted to. But such a procedure had not to be followed, as the internal use of the drug produced clammy perspiration. During the night the patient was very delirious, uttering all sorts of nonsense at the top of her voice. The temperature rose to 104° F. Phenacetin had no effect in lowering the temperature, so ice-bags were constantly applied over the head. This had the effect not only of lowering the temperature, but ameliorating the delirious symptoms of the patient. A decoction of an Indian drug, *swet punarnava* (*Burhaavia Diffusa*, Linn., N. O. Nyctaginacæ), was given in the form of a drink, which produced profuse diuresis. The crisis was over. The gall-bladder was felt for; it was found tensely distended, and gentle friction with the finger was advised. The urine was again examined for albumen, and, as the quantity found was trifling, stimulant diuretics of juniper and broom were administered in addition to the decoction previously mentioned. The friction over the gall-bladder had the desired effect, for the stools passed by the patient after the manipulation were purely green in color, consisting of nothing but thick bile. The urine, too, increased in quantity. The jaundice disappeared in a fortnight.

The most interesting point was the supervention of symptoms of cholæmic and uræmic poisoning. The cholæmic poison is a depressant of the nerve-centre, but how it could have produced such a noisy delirium is difficult to make out.

Case 2.—An adult male was laid up with an attack of fever and jaundice; the temperature was 103° F., urine bilious, stools clay-colored. Diaphoretic mixture administered every three hours, and pills of calomel, rhubarb and ipecac twice daily. On the fifth day he became delirious, tongue cracked and dry; the delirium was of a muttering character. He continued in this precarious state for three days, when symptoms of improvement set in with a slight moisture at the edge of the tongue. The pills were continued twice a day, and, in addition to these, 20 grains of sodium bicarbonate in five ounces of tepid water were given as a drink. This served the purpose of fomenting the tissues, and hurrying on the bile in its way towards the duodenum. The fever gradually diminished in intensity, the urine became less bilious, the stools became yellow-colored, and the patient was discharged cured.

Case 3.—This was of an elderly female. Had previously complained of pain over the seat of the liver. Got an attack of fever with jaundice. Pills of calomel and rhubarb were ordered, and sodium sulphate in two-drachm doses three times daily. The fever wore away after a week's treatment, the stools became yellow-colored, the urine and

the conjunctivæ less so, till a fortnight after, when she was discharged cured.

Case 4.—An elderly man used to attend the local dispensary for treatment of a slight yellow tinge of the conjunctivæ. The urine was bilious and the stools whitish in color. He had no fever previously. Put on pills of calomel and rhubarb. After two days the gums were affected and he had salivation. The pills were stopped, and soda sulphate in two-drachm doses four times a day was administered. This was continued for a fortnight, when the yellow color of the conjunctivæ had passed away, as well as that of the urine, and the stools had resumed their natural color.

Rauch Dispensary, Calcutta.

RELATIONS OF DISEASE, ESPECIALLY CROUPOUS PNEUMONIA, TO METEOROLOGICAL CONDITIONS.

BY DR. A KUEHNER.

Our age is dominated by bacteriology. Never was the infectious potency of diseases so sharply defined as in the last few decades, and never before was such an effort made to bring to light the sources of diseases and infection as at the present time. But even here, where micro-organisms unfold distinct infectious substances and noxious effects, this process presupposes that the tissues of the organism are in a condition offering favorable opportunities for the invasion and multiplication of the microbes. The fact that susceptibility to infection varies with different people, and varies even in the same individual at different times, demands for explanation certain elements facilitating the process.

Among these elements, the meteorological has always been accorded an important influence despite the mystery in which it has remained shrouded. The dependence of disease upon such has recently been carefully investigated by Magelssen, of Christiania, and the results embodied in a volume entitled "On the Relations of Disease to Weather." In the complex tableau of cosmical and telluric influences, the action of temperature is treated as of the greatest importance. That sudden transitions of temperature, as to an unwonted degree of heat or cold, may conduce to disturbances of health, is universally admitted, whether these effects comprise one or more years, or one or more seasons, months, weeks, or days. That this is true, in accordance with the general theory, not only of respiratory diseases and "colds," but also, and in a far greater measure, of infectious diseases, Magelssen has demonstrated by a number of very eloquent curves—a fact which is most surprising, and vigorously supports the assertion that, apart from micro-organisms, other conditions must prevail to favor the process of infection. Infectious diseases, indeed, according to the curves obtained by Magelssen, seem to be more dependent upon the weather than either of the first two groups of maladies. This relation of dependence is, at bottom, not to be wondered at. The human organism and its caloric supply must maintain a constant equilibrium with the external temperature, yielding or receiving heat. The modifications wrought in the general condition of the economy by transitions of temperature, must find expression in an increased or reduced susceptibility or disposition to all forms of disease, be they psychic or physical, be they conditioned by external micro-organisms or by modifications within the body.

Amongst all the infectious diseases, influence of the seasons has been recognized with greatest certainty in its bearing upon the frequency of pneumonia. In times when bacteriological research was unknown, oscillations of temperature were regarded as the sole ætiological factor, with reference either to long intervals or to sudden transitions. Even to-day we find this corroborated, with respect to general and individual disposition, in all current text-books. So far as general disposition is concerned, we find the statement that two-thirds of the pneumonic diseases must be referred to the winter and spring months, and one-third to the months of summer and autumn. Insular residents, as in England and Ireland, show a somewhat different behavior in this respect, from that of the Continental; the latter present the greatest number of pneumonic diseases in the months from March to May, and the smallest number from September to November; the former show the greatest frequency of disease to prevail from December to February, and the least from June to August.

The widely accepted view of the influence

of high altitude, of harsher climatic conditions and of exposure to winds, is dubious in the light of Ziemssen's deductions. Nor have we a greater right to suppose the existence of a relation between the frequency of pneumonia and the state of the barometer or the temperature of the atmosphere; on the other hand, pronounced oscillations in the latter seem to promote morbidity. The degree of moisture exerts no definite effect.

With respect to individual disposition, impartial researches have shown that life in the open air and under exposure to the various influences of the weather does not increase susceptibility to croupous pneumonia, but that, on the contrary, such susceptibility is rather promoted by a sedentary mode of life.

These general remarks, to be found in the current text-books on the ætiology of pneumonic diseases, have recently been set forth with precision by Kolksky in an inaugural dissertation at Moscow, on croupous pneumonia, on the basis of observations extending over three years, as follows:

Bacteriology is unable to explain the distribution of the disease over certain seasons, months, and years:

Meteorological processes, and the conditions of the weather depending thereupon, play a very important rôle in the ætiology of croupous pneumonia, though they are not the only factor as was previously supposed:

To determine with precision the influence of the weather upon the development of croupous pneumonia, we need not only an abundance of clinical material but also a fund of prolonged observations of the various oscillations of weather:

Croupous pneumonia is most frequently observed under conditions, persisting for a certain time, which deviate from the normal course of things:

The greatest number of cases of croupous pneumonia in Moscow occur when the temperature and its daily variations remain for a time under the normal; with low barometer; during prevailing north winds; and during comparatively slight rainfall:

All these meteorological processes are intimately bound up together, correspond to the meteorological condition, and are connected with the prevalence of west and east winds:

The study of the connection of croupous pneumonia with the west and east winds, as factors in the modification of the weather, will be the task of the future:

Oscillations of temperature in the neighborhood of the freezing-point (32° F.) favor the contraction of the disease:

More cases are therefore observed during mild winters, since the temperature then frequently oscillates about 0° C. (32° F.):

The assumed "catching of cold" as an ætiological factor in croupous pneumonia, is corroborated in the most recent observations:

The curve of frequency in this disease remained, during observations covering several years, nearly parallel with the summary of barometric curves:

Investigation of the influence of relative moisture yields contradictory results with respect to the season of the year; it seems that the extremes favor contraction of the disease:

Seibert's statement, to the effect that the frequency of croupous pneumonia on the one hand, as well as the curves of temperature-oscillation, do not coincide with the relative moisture—are not parallel, but rather diverge—has not been substantiated:

The theory that the disease increases in frequency during the prevalence of violent winds, is not borne out by statistics. Years marked by violent wind currents rather correspond with years of mild development in the disease:

Masson's method for determining the dependence of croupous pneumonia upon the weather, has the advantage of rendering possible a comparison of the results of observation at various places, according to different figures, and with proper allowance made for the distribution of the disease:

In order to elaborate a scientific method of investigation into the connection between croupous pneumonia and the weather, the cooperation of the meteorologists is desirable:

The curves of the meteorological month-waves and year-waves coincide in their maximum with the frequency of the disease, and diverge during the period of their minimum.

Frankfort-on-the-Main.

NOTES ON CHOLERA AND ITS MANAGEMENT IN HULL, ENGLAND.

BY JOHN WRIGHT MASON, M.D.*

The first epidemic of cholera in Hull occurred in 1832, but the total number of deaths did not exceed 270. On August 10th, 1849, the *great* visitation of the disease commenced, and the total number of cholera and diarrhœa victims during this invasion was 1,860, being one in forty-three of the whole population (11,000); six hundred persons died from cholera alone in one week in September. The average age of the victims was from 30 to 36 years of age. Of the total number of deaths recorded, 1,738 belonged to the laboring classes, and 122 to the wealthy. The greatest mortality occurred in those parts of the town where the levels were the lowest, and in which the unsanitary surroundings were most noticeable. It is recorded by an eminent minister that on one day—"Black Sunday"—he himself interred no less than 43 bodies of his fellow citizens. The water supply was at that time obtained from the Stone Ferry Water Works, situated one and a half miles from Hull and two and a half miles from the mouth of the river Hull; the widespread character of the epidemic was generally attributed to the impurity of this river water. Since 1849, Hull has increased both in wealth and population, and its area has been considerably entended. The number of emigrants passing through the port *en route* for America has averaged between 50,000 and 60,000 yearly during the past ten years. The Infections Diseases (Notification) Act, of 1889, has been applied to the port as well as to the urban authority. Measles was included among the notifiable diseases on the 10th of February, 1893.

Cholera follows the line of international communication, and with the modern increased facilities for rapidity of transit, so is the danger of its possible invasion increased by emigration or otherwise. England does not depend upon the false security of quarantine, but rather upon its sanitary administrations, and each district should be in such a state of sanitary preparedness that the disease, if imported, cannot spread. The experience of 1892, during the epidemic at Hamburg, in those ports which were exposed, and possibly none more so than the port of Hull which was in daily communication with that cholera-stricken city, must have inspired confidence in the public mind in this country and on the Continent of Europe, that medical inspection, due regard for the rigorous inspection of all articles likely to convey infection, improved sanitation, and efficient hospital equipments, were alone sufficient to arrest the progress of the disease.

Our first line of defense against the introduction of cholera or other diseases consists of the medical inspection, both by day and night, upon arrival, of all vessels from cholera-infected or suspected ports, and, should cholera have developed during the voyage among any of the passengers or crew, the removal of the patients to hospitals, the isolation of suspected cases, and the detention on board the vessel of such persons who may be in a filthy or otherwise unwholesome condition, and who cannot satisfy the Medical Officer of Health as to their place of destination.

The second line of defense should be well protected, and the early preparations against the means by which such diseases, if imported, spread, should be studied, thought out, and perfected in the interim, and not during epidemic prevalenee and excitement. Special attention should be directed towards a pure and unpolluted water-supply, the periodical and regular removal of all excreta and refuse matters in the midst of populations, the frequent flushing of all drains and sewers, the prevention of overcrowding, the systematic inspection of common lodging-houses, and lastly, but not least, the food supply.

The precautions instituted by the sanitary authorities last year, for the second line of defense, have been uninterruptedly carried out, with further additions, and are as follows:

A letter has been addressed to the medical practitioners in the borough, requesting them to notify all cases of choleraic diarrhœa to the Medical Officer of Health, on the usual notification form, and for which a fee will be paid:

A supply of diarrhœa-mixture has been forwarded to the various branch police and fire-escape stations for gratuitous distribution:

* Medical Officer of Health, Hull, England.

A supply of disinfectants has also been established at the various branch police and fire-escape stations and sanitary departments for distribution, and all the medical practitioners have been supplied with orders to provide disinfectants wherever they may deem necessary:

Complete hospital accommodation has been provided for the reception of patients, and a reserve of beds and tents are held in readiness:

Ambulance arrangements have been provided for the immediate removal of the patients, and a reserve in readiness if required:

The sanitary offices are kept open day and night, and telephonic communication established between the residence of the Medical Officer of Health, the hospitals, and the various branch police and fire-escape stations, where messages may be received:

All cases of deaths from cholera occurring in private houses are removed to the mortuaries specially erected in the various cemeteries, and the bodies are interred in an isolated portion of the ground under the direction of the Medical Officer of Health; the Assistant Inspector for the district carrying out the various details, the sanitary officers acting as bearers, every sanitary precaution being adopted:

The cholera sub-committee, specially appointed, meet daily at noon to receive the reports of the Medical Officer of Health, and are empowered by the Town Council to take every precaution they may deem necessary in the interests of the public health, irrespective of cost.

Hull is essentially a privy town. The death rate of Hull from all causes for the ten years 1882 to 1891 averaged 20.7 per thousand. The death rate from fevers during the same period was equal to 1.26 per thousand, and for diarrhœa alone 1.10 per thousand.

With regard to the management of cholera, the precautions which are adopted in Hull of what has been described as "the movement of a sanitary column," are as follows:

Immediately upon the receipt of a notification of cholera, or of sudden illness of a choleraic character, either by the medical practitioner in attendance or the sanitary inspectors or the police, the Medical Officer of Health, or in his absence his Assistant, is communicated with and immediately visits the case. Should the case admit of removal, the horse ambulance, fully equipped, with trained men in attendance, is immediately requisitioned by telephone. The Assistant Inspector of Nuisances for the district in which the case occurs is forthwith informed, and makes his appearance with a column comprising flushers, lime-washers, and a disinfectant staff. He superintends the removal of the inmates of the house to the hospital for the purpose of bathing, and the disinfection of their clothing, the disinfection of the house, together with all articles of bedding, clothing, etc., which had been exposed to infection, and the destruction of such articles as may be ordered by the Medical Officer of Health or his assistant. The contents of the privy are removed to the destructor for cremation, and the interior cleansed, disinfected, and lime-washed. The subsidiary drains in immediate contiguity of the house are thoroughly flushed, and disinfectants are freely distributed in the neighborhood of the outbreak.

HUMAN VIVISECTION.

Doctor J. S. Pyle, of Canton, Ohio, in the Tri-State Medical Journal, advocates the relegation of criminals condemned to capital punishment to physiologists and pathologists for experimental purposes and procedures, such, however, to be under careful scientific supervision, with exclusion of non-medical observers, reporters, and the like.

That such would be of great benefit, no one doubts; but what a glorious opportunity for antivivisection "cranks"!

WARNING TO SURGEONS.

Professor Albert, in a recent report to the Vienna Medical Society, warns surgeons against the constant use, without precaution, of corrosive sublimate as an antiseptic. He declares that, having for a long time suffered from an intractable dyspepsia, the idea struck him it might be the result of mercurial poison. Chemical analysis of urine revealed this to be the fact.

Correspondence.

"CEREBRINE" AND THE VERACITY OF WILLIAM A. HAMMOND.

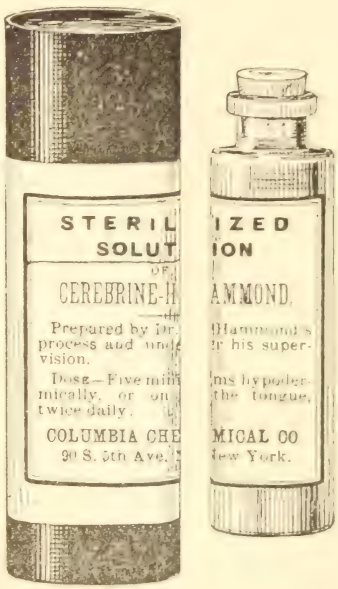
To the Editor of the MEDICAL AGE:

In your issue of December 10th, in an editorial relating to one William A. Hammond, of Washington, D. C., and his purported "animal extracts," *Cerebrine*, *Medulline*, etc., you reproduce a circular put forth by the Columbia Chemical Co. in which my name is mentioned along with an allusion to an analysis of these products by Professor Delafontaine, of Chicago.

The statements made in this circular, while embodying perhaps a measure of truth, are in fact so adroit a distortion of my own utterances as to constitute a veritable falsehood. This is not at all strange, however, when it is known that William A. Hammond is not only the President of the Columbia Chemical Co., and its chief stockholder to the tune of $250,000—stock received in return for the assignment of numerous trademarks, including the "animal extracts"—but is manager of this concern, and solely responsible for its advertising.

Said Hammond makes it appear that I have given utterance to two separate and conflicting statements regarding where I obtained the "Cerebrine (Hammond)" employed in my investigations in June last, and reported in the Medical News. This is not true. I simply replied to a query of his, manifestly made with special and ulterior intent, that said material was obtained in Washington, and that it was derived *from* the Columbia Chemical Co. The party through whom I obtained said "Cerebrine" requested that his name should not appear in connection therewith, and this for personal reasons, knowing the vindictiveness of the great "retired." I have only to say that the person who procured this "Cerebrine" is thoroughly reliable, and has always borne such character.

In order to make the facts more patent, and that my investigations were made with the genuine Hammond product, I have been to the trouble of having prepared *fac-similes* of one of the bottles of "Cerebrine" obtained by me, and its container (the latter unbroken when received), and also the wrapper which enclosed the phial.



CEREBRINE.

PREPARED ACCORDING TO THE PROCESS AND UNDER THE SUPERVISION OF
DR. WILLIAM A. HAMMOND.

(See *New York Medical Journal* January 25, 1890, also lectures delivered at the New York Post-Graduate Medical School and Hospital January 25, 1890, *Virginia Medical Semi-monthly* March 1890, and other Medical Journals.)

CEREBRINE is the sterilized extract of the brain of the ox and contains the substance required by the brain for its nutrition and normal action. It is possessed of great power, its effects being experienced in a few minutes, and continuing in a modified form for several days. It should not be used except under medical advice.

It is of singular efficacy as—

1st. *A Resistant to the Advances of Old Age*.—It should be taken for this object in doses of five minims, hypodermically twice daily, at intervals of from ten to fifteen days in every month.
2d. *In Nervous Prostration or Neurasthenia.*
3d. *Hysteria.*
4th. *Nervous Dyspepsia.*
5th. *Hypochondria and Mild Forms of Mental Derangement.*
6th. *Functional Brain Disturbance* due to defective nutrition of the organ.
7th. *Temporary or Long Continued Brain Exhaustion* resulting from intellectual or emotional strain. A single dose will, in cases of the last named condition, frequently act as a complete restorative of the nervous system.
8th. *Insomnia* resulting from over mental work. In such cases it should not be administered within four hours of bed time.

CEREBRINE not being a substance foreign to the body, and acting as it does solely as a restorative, is not followed by reaction or subsequent formation of a habit.

CEREBRINE is preferably administered hypodermically in doses of five minims; but from seven to ten minims may be dropped upon the tongue and allowed to be absorbed from the mucous membrane of the mouth. Its action is, however, slower and not so decided.

EACH BOTTLE OF
CEREBRINE
CONTAINS SUFFICIENT FOR TWENTY-FOUR HYPODERMIC DOSES.

Also Prepared on Similar Process under Dr. Hammond's Supervision.

MEDULLINE, the extract of the spinal cord. TESTINE, the extract of the testes. OVARINE, the extract of the ovaries. THYROIDINE, the extract of the thyroid gland, and PANCREATINE, the extract of the pancreas. For medical use in diseases of the corresponding organs of the body.

Columbia Chemical Co., 90 S. 5th Ave N. Y.

I may further add that a portion of the "Cerebrine (Hammond)" that I have obtained on different occasions was secured through a well known house in New York;

and also that I hold the original bills for "Cerebrine" from the Columbia Chemical Co.

Since July 1st, about which time said Hammond began to talk of the action of his "Cerebrine," "Medulline," "Cardine," etc., resembling nitro-glycerin, his so-called "animal extracts" have been put up in differently shaped bottles, and bear across the yellow label a *fac-simile* of said Hammond's signature. The first packages of "Cerebrine (Hammond)" certainly were devoid of nitro-glycerin, and likewise of any therapeutic value. And I now state emphatically that the examination of these products of the so-called Columbia Chemical Co. was undertaken solely for my own satisfaction, and not at the instigation of Parke, Davis & Co., or any other firm or individuals. It certainly does not speak at all well for the character of the man who is obliged to bolster up his preparations by means of deceit and fraudulent statements.

I wish to further add that I now have in my possession a quantity of "Cerebrine" prepared by a skilled chemist (a title William A. Hammond will scarcely venture to arrogate to himself) *exactly* after Hammond's published method *with strict fidelity to every detail as to time*, etc., and that this is equally as inert as Hammond's original product put forth by the Columbia Chemical Co Furthermore, Parke, Davis & Co., at the time they issued their "Cerebrin," as a matter of control experiment undertook the manufacture of a quantity of "Cerebrine (Hammond)," *i.e.*, after the precise process of William A. Hammond; that this has long been a finished product and is still standing upon the shelves in their analytical laboratory; and that this, prepared by maceration for eight months, and presenting the same precise characteristics in every particular as the Columbia Chemical Co.'s original "Cerebrine (Hammond)," is equally inert.

That Hammond may perhaps have anticipated the sophistication of his product with nitro-glycerin seems probable from the fact that such sophistication began on or about July 1st of the present year, and was duly prefaced by an article in the New York Medical Journal, claiming for his product a physiological action that pertains only to the nitrites. And it may not be generally known to the public that back in 1880–81 said Hammond posed as an authority on nitro-glycerin, even publishing articles upon its therapeutic use.

Attached hereto I offer for the delectation of the readers of the MEDICAL AGE a clipping from the columns of the Journal of the American Medical Association embodying a reply from Professor Delafontaine to the statements of Hammond made in that journal and also in the circular before quoted by you in your editorial.

Very truly yours,

G. ARCHIE STOCKWELL.

Detroit, Mich.

CHICAGO, Nov. 22, 1893.

To the Editors:—In your issue of August 26th, you published a communication of mine on Hammond's "Cerebrine" in which the presence of nitro-glycerin was suspected.

The results of my chemical examination of that article, also a bottle of Hammond's "Medulline," showed how well was founded that suspicion.

A few weeks later Dr. Hammond made public a reply, the essential part of which is that I could not have analyzed the genuine article since I failed to find alcohol and boracic acid in it.

Such a way to meet the issue was so weak, under the light of my statement of the true object of my investigation, that I was contented to let the matter rest without any further remarks.

Since then, I have seen a circular issued by the Columbia Chemical Co., the manufacturers of Dr. Hammond's animal extracts, which says that I failed to find water, alcohol, boracic acid, and animal matter in the sample examined by me.

Therefore the trade is warned that unscrupulous dealers get empty bottles of Dr. Hammond's products and fill them with some dangerous imitations, and palm them off as the real article, out of pure deviltry evidently.

Let us bring back the question on its true ground. I never pretended to publish a complete analysis of Dr. Hammond's "Cerebrine" and "Medulline," because that was unnecessary.

The only question for me to solve was, whether the physiological effects of the two articles are due to some extraneous matter, namely, nitro-glycerin, or to some ptomaine.

A priori there was a faint possibility that a six months' maceration of brain matter might be attended with the production of Neurine, or Neurine and Choline, possibly Muscarine also.

Those three alkaloids have decided and powerful physiological properties not entirely unlike those of nitro-glycerin. The general tests for alkaloids failed to show their presence.

On the other hand I obtained decided reaction

characteristic of nitro-glycerin or, I added, some other closely allied substance (some nitrite, for instance).

Since the publication of my first note, I examined, with exactly the same results, another *unbroken package* of "Cerebrine."

The original bills seen by me show that the three samples were sold by the Columbia Chemical Co. (New York) to Messrs. Lehn & Fink (New York), who forwarded it to Messrs. Gale & Blocki (Chicago), from whom I received it unopened.

With high regard,

M. DELAFONTAINE.

—*Journal of the American Medical Association.*

TOXICOLOGICAL EXAMINATIONS IN MICHIGAN.

To the Editor of the MEDICAL AGE:

The status of toxicological questions as they at present exist in the commonwealth of Michigan is certainly humiliating. Within one month (August–September, 1893) I observed in the public press, reports of a dozen toxicological cases, not one of which received the professional treatment the public has a right to expect. Proofs of the foregoing, moreover, have recently been forwarded by me to the State Board of Health, which seems to be the proper body to act upon some such suggestions as I have the honor to propose. The following is a brief outline of such proposals:

Procedures in Poisoning Cases.

1. Every toxicological question shall require an order from the Court before an investigation is instituted.

2. The Court shall select two physicians and two analytical chemists to appear before it, who shall be sworn not to impart, save to said Court or on its order, any of the results derived from, or relating to, an investigation. Reports to the Court shall be in writing, and embody:

(*a*) Viewing of the corpse:

(*b*) Examination of blood spots:

(*c*) Examination of foods and medicines:

(*d*) General chemical and microscopical analysis when such is demanded:

(*e*) Such other results as may be essential to the determination of the crime.

The foregoing closes the witness-box to charlatans, who, as a rule, have little interest in justice or regard for truth, humanity, or honor, but seek only notoriety and gain.

The physicians shall perform post-mortems in the presence of the chemists, and such organs or portions of the body as are essential to evidence or needed for chemical and microscopical purposes shall be sealed up and preserved to await further order from the Court.

The Court, when necessary, shall submit the written reports of physicians and chemists to experts, under the advice of the State Board of Health; and these same reports, made out in quantitative analytical style, shall appear in the annual publications of the State Board—this affords opportunity to correct errors, and moreover permits the proceedings of the State Board of Health to be utilized as guides and references in future cases.

3. If the regulation of the sale of poisons in Michigan receives proper legislation, it will be possible for the Court to trace from the records kept by druggists the sale of poisonous substances. Legislation in this direction should require druggists to keep records of the sale of all poisons, and that such sales may be made *only* to persons personally known to them. Just as a bank requires identification of everyone who offers a check, so the druggist should be required to secure the identification of every person purchasing a toxic substance.

4. All fees to be paid by the State according to a definite tariff; for instance: (*a*) Thorough quantitative and qualitative analysis, $250: (*b*) A not fully defined toxicological question of equal importance, $250: (*c*) Microscopical examination of blood stains, $75: (*d*) Quantitative and qualitative analysis of food or drugs, $50.

5. Violations, perjury, etc., to be punished to the full extent of the law, which should carry with it ample penalty.

Also in connection with such legal enactment as outlined in the foregoing, it should be forbidden any physician to make a toxicological or chemical analysis on his own account or in connection with a Coroner's inquest, same as before noted.—This action is necessary from the fact that the incompetence of any individual may destroy the very evidence essential to the detection of crime or to the judgment of the Court.

I could occupy columns in discussion of the demoralizing effect, both judicial and chemical, of the present aspect of toxicological questions, but as it is a remedy that is desired rather than a recapitulation of errors, I offer the foregoing and invite discussion thereon.

Very truly yours,

J. B. NAGELVOORT.

Detroit, Mich.

OBVIATING TOBACCO SMOKE.

Platinum at a white heat will consume any amount of tobacco smoke, hence it is said a piece of platinum wire suspended over a gas jet serves this purpose very well.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., DEC. 26, 1893.

Editorial.

EXPERT TESTIMONY AND CORONERS' INQUESTS.

We would call attention to the communication in our correspondence column from Mr. J. B. Nagelvoort, which deals with a wrong of long standing, and that has been a blot, not alone upon the Commonwealth of Michigan, but upon most of the States in the Union.

There seems to be but one remedy for the errors that are so constant in this connection, not alone to "crowners' quests," but to justices' and higher courts. The question hinges entirely upon the appointment of experts in the one case, and the abolition of the office of Coroner in the other.

It certainly would be of great advantage, and in the interests of justice, if all experts were selected by the Court; perhaps it would be better if two or more individuals could be appointed as special experts in each Circuit or District Court jurisdiction, who should furnish evidence both *pro* and *con*—in other words, the expert testimony would be neither for or against either plaintiff or defendant, but simply for the information of the Court and in the interests of exact justice. It is needless to say any such offices should be entirely without the control of politics, or sectarianism of any kind, and the appointments based solely upon fitness, with a tenure subject only to malfeasance.

Regarding the office of Coroner, it must be admitted that the more speedily it is abolished, the better. As at present constituted it is a position held chiefly by the most ignorant—by the "rag-tag and bob-tail" of the political element—individuals devoid of education, entirely unfamiliar with legal processes, and whose sole aim is to secure the largest fees that can possibly attach to the individual case.

It is doubtful if any better substitute can be offered than that now existing and well proven in Massachusetts, whereby the office of Coroner is replaced by that of a salaried "Medical Examiner," whose province it is to view all cases that in this State come before the former official, to make post-mortems when demanded, and to call upon the resources of legal machinery when such are deemed necessary. This officer must on all occasions be a physician, and is supposed to be selected because of his expert ability — because of familiarity with chemico-toxicological questions, with anatomy, physiology, pathology, histology, microscopy, etc. The "Medical Examiner," moreover, has the option, on viewing a corpse and deciding upon the cause of death, of permitting burial without further examination, or of proceeding to elaborate legal inquiry. The State of Massachusetts is, we believe, divided into districts according to population, in each of which the resident Medical Examiner is paramount, but with the privilege, when necessary, of calling upon neighboring Medical Examiners, thereby practically forming an expert jury.

The saving that would result from abolition of the office of Coroner, with a change to an official possessed of the powers above outlined, would be considerable from a financial standpoint. The immeasurable value to the public at large from judicial and moral standpoints must be patent to the dullest comprehension. There is not the shadow of an excuse in this latter-day civilization for the perpetuation of the office of Coroner, which long since became practically obsolete, and for many years has served no earthly purpose save that of a link in the chain of political power. Certainly such should not longer be permitted to remain a factor in blocking the wheels of justice. Indeed, the office as constituted is an absurdity, and has in no inconsiderable degree added to that unenviable reputation which some of the States possess for perpetuating laws made solely in the interests of politics and transgressors.

SMALL SENNA.

Growing in Liberia and on the western coast of tropical Africa generally, in fact a

weed common to most tropical countries that planters would fain be rid of because of its sickly offensive odor, is a plant locally known as "negro coffee," "Fedegozo," "wild coffee," and "small senna." Botanically known as *Cassia occidentalis*, it is closely allied to ordinary senna, the whole plant being purgative, an action that is mainly attributed to the mucilaginous and extractive matters present in conjunction with a small percentage of chrysophanic acid.

It may be added the value of the plant is generally recognized; Mohammedan writers recommend it in coughs, especially pertussis: among Central Americans an infusion of the root is considered highly antidotal against various poisons, animal, mineral and vegetable; in Brazil the same preparation is employed as a tonic and diuretic in dropsy and liver complaints, and the second named property has gained for the plant the same vulgar title that country people are wont to apply to the dandelion.

Unmistakably one of the most useful purposes of Fedegozo is its activity as a febrifuge. It has been extensively employed in the West Indies and in France in the treatment of tropical and malarial fevers. For this purpose, in the Antilles, an ounce of the seed is boiled in ten ounces of water until the finished product measures but nine ounces, the whole being administered during the cold period, or between rigors, when profuse perspiration results; in Europe the decoction is substituted for by a wine made by maceration of 60 grammes of seed in a litre of Malaga.

In tropical countries, notably Africa and the West Indies, the seeds are extensively employed in place of coffee, and in some of the French colonies are known as *café nègre*, and *café maron*. Indeed, when properly roasted, ground, and made into infusion in the same way as ordinary coffee, it is stated the resemblance to the finest Mocha in unmistakable; and this is confirmed, moreover, by Doctor Nicholls, of Dominica, in a letter to the Royal Gardens of Kew, a few years back, in which it is stated:

I collected some seeds, and directed my cook to roast and grind them so that I might taste the "coffee." Other matters engaging my attention, I forgot the circumstance until several days afterwards when, one evening, my wife inquired how I liked my after-dinner cup of coffee. I turned to her inquiringly, when she laughingly said: "That is your wild coffee." I was indeed surprised, for the coffee was indistinguishable from that made of the best Arabian beans, and we in Dominica are celebrated for our good coffee. Afterwards some of the seeds roasted and ground were brought to me, and the aroma was equal to that of coffee ordinarily used in this island.

Doctor Livingstone took some of these seeds to the Mauritius Botanical Gardens, and mentioned that the natives of tropical Africa roasted and used them like coffee.

It has not been definitely stated that the infusion causes any stimulating effect, but such is a fair supposition, since otherwise the natives would hardly employ it as a beverage.

Chemical analysis proves Fedegozo seeds to consist of:

	Parts.
Fatty matters, olein and margarin	4.9
Tannic acid	0.9
Sugar	2.1
Gum	28.8
Starch	2
Cellulose	34
Water	7
Calcium sulphate, Calcium phosphate, and Chrysophanic acid	0.9
Malic acid, Sodium chloride, Magnesium sulphate, Iron, and Silica	5.4
Achrosine	13.5

Achrosine is soluble in water, and communicates to the latter a garnet color. It contains oxygen, hydrogen, carbon, and sulphur, but its exact composition has not been determined; it is soluble also in alcohol, and in acids and alkalies. The color cannot be fixed upon tissues by any known mordant, and it is this circumstance that induced Professor Clouet, who made the analysis, to term it *achrosine*, or non-coloring, although being colored itself.

It is not improbable that, on further investigation, this coloring matter may prove an important feature from an alimentary point of view, as has recently been proven to be the case with kola. For many years scientists were puzzled over the nature of the substance in kola-nut that produced a stimulating and nutritive effect. It was at first suggested this was due to caffeine, but exper-

iments subsequently proved this was not the case. After prolonged research Professor Heckel, of Marseilles, practically demonstrated that the muscle-bracing and other beneficial properties of kola were entirely due to the presence of a coloring body which he designated *rouge de kola*, but which a German scientist has latterly baptized *kolatin*.

IPECAC AND NEWBOULDIA WITH REFERENCE TO DYSENTERY.

In tropical and subtropical climates the management of dysentery has always been a *vexata quæstio* to the medical profession, consequently any proposed changes in treatment must possess considerable interest. Ipecac and drugs of a similar class that heretofore have appeared to afford best results, as is well known, are at times uncertain and futile in action.

Recently Doctors Kanthack and Caddy advocated the use of de-emetinized ipecacuanha, believing that the alkaloid of this drug was the one inhibitory factor in the management of intestinal flux; and their opinions have in some degree been upheld by Doctors Prescott, Crombie, and Harris. Per contra, Doctor Walsh and some others deny such claim *in toto*.

The positive evidence seems to be based upon the scanty assertion "That no proof exists to establish the view that the antidysenteric value of ipecacuanha depends on its emetine;" from which is drawn the conclusion: "In *ipecacuanha de-emetinisata* we possess a valuable remedy in cases of acute dysentery."

The opposition holds that emetine, far from being an offensive derivation, is *per se* the remedial principle of the drug, and consequently that any attempt to manage dysentery without this important alkaloid must result in failure, or if relief is afforded, such is derived from the psychic factor and *vis medicatrix naturæ*.

The followers of Doctors Kanthack and Caddy are decidedly in the minority; and furthermore it must be admitted that the majority of physicians of India are in opposition, and the latter certainly are entitled to credence on the grounds of extended experience. Aside from the foregoing, there is an economic view to be considered: Is it not extremely hazardous to endeavor to substitute an expensive drug for a medicament that is comparatively cheap and effectual; would it not be well to wait patiently for a substitute ere is cast aside the great "sheet-anchor" for the relief of a common malady in favor of a new-fangled and insufficiently tested preparation?

One of the objections regarding ipecacuanha in the past has been that different samples vary in their content of emetine, and the deficiencies have been made the scapegoat (and no doubt justly) of the failure of the drug; but for this there is no longer an excuse, since such is now obviated by the wide distribution of normal liquids, assayed extracts, etc., etc.

Recently has been introduced to the medical world another drug, which in relation to this disease promises not only to outshine ipecac, but to be much more active, prompt and efficient—and this is *Newbouldia lævis*, a plant of the natural order Bignoniaceæ, from the west coast of Africa, but whose generic and specific classification is not altogether settled.

Newbouldia was first brought to the attention of the profession by Doctor J. F. Easmon, in the Provincial Medical Journal, who was led to employ it for the relief of the acute malarial splenitis so common in the Peninsula of Sierra Leone. In 1881–82, while in the Quittah District, he began its use for the treatment of dysentery due to atonic condition of intestines, and his results were "so satisfactory" he was led to employ it in all cases of the malady that came under his care. Subsequent experience in the hospitals of Accra Lagus so established the utility of the drug in maladies of this class hat he was induced to forward specimens to Doctor Sidney Ringer, of the University College Hospital, London, when the latter speedily confirmed the claims made. Latterly *Newbouldia* has been extensively employed by practitioners both in England and America with success that is almost phenomenal. It is not simply an astringent, but acts by modifying the circulation, and as a tonic to the muscular coat of the arteries and the muscular striæ of the intestinal tract.

In the first stage of dysentery the treat-

ment is best preceded by a full dose of castor oil or a saline purgative—the latter especially when there is more blood than mucus in the stools. As soon as the bowels have acted twice or thrice, the remedy should be given in full doses—fifteen to sixty minims of the fluid extract—and repeated until constipation is induced, when the administration may be continued at less frequent intervals until there is manifest absence of dysenteric discharges for at least twenty-four hours. Now the drug is to be slowly withdrawn by administering in continuously lessening doses until it is discontinued altogether, when it should be replaced by some gentle aperient.

So far as evidence has been adduced, it appears that in Newbouldia we have a remedy which combines the virtues of both ipecac and coto, and that too with none of the evils attendant upon the latter drugs.

ASTONISHING!

It is somewhat remarkable, to say the least, that it is quite impossible to obtain a rabid animal, dead or alive, for scientific purposes; also that since the Pasteur craze has practically fallen into desuetude in Europe, the public press—who are usually only too eager in such matters—has rarely chronicled a case of even supposed hydrophobia; and yet in the face of all this, several so-called "Institutes" in the United States seem able to report each year a phenomenal number, constantly increasing, of people cured of rabies by means of their inoculations.

We have lately received reports from several different so-called "Institutes" which evidence that within the limits of the United States and Canada nearly two thousand individuals have been bitten by rabid animals within the last twelve or sixteen months, and all of course have been submitted to the inoculation treatment and duly cured.

When it is remembered that the proportion of all diseases which appear at public institutions is but a small fraction of the total number occurring, we must believe (if these statements are true) that rabies is extremely prevalent in North America, both in the human and animal, likewise that it is much more dangerous than yellow fever, cholera, dengue, beri-beri, and numerous other maladies. When the "Institutes" can secure such a vast number of patients yearly, there is no option left but to believe hydrophobia is a widespread dangerous malady threatening the entire community.

One of two things is evident: Either special legislation is demanded for the prevention of this malady, or: Means should be immediately taken to suppress these so-called "Institutes" which serve no purpose save those peculiar to their authorship and for the dissemination of false rabies, which is always dangerous in any community, especially in one ignorant of higher medical science, because of its tendency to epidemic character.

PECULIAR FORMS OF SLEEP OR ALLIED CONDITIONS.

Doctor Wesley Mills, before the Canadian Medical Association, gave a report of observations on the woodchuck (*Arctomys monax*) during a period of five years, and more particularly during its season of hibernation. With the phenomena presented he compared strikingly similar phenomena in two or three cases presented by human individuals. Some of the points made were: The periodicity of attacks of stupor; abstinence from food and consequent emaciation; great slowing of circulation and respiration; the partial cessation of stupor to attend to urination and defæcation, and; tendency to increased reflex action.

The account of lethargic conditions in man were of exceeding interest, the cases all being authentic, some having come under Doctor Mills's own observation. Doctor Mills, as an evolutionist, contends that these tendencies in man are analogous to those in lower animals, and inherited from them, so to speak. Although taking this advanced view, he declares he is inclined less than ever to "pooh-pooh" what is said regarding trances and other similar popular notions.

ITEMS AND NEWS.

Arsenic and Cholera.—

A monthly publication called The Arena, which aspires to deal with the larger problems of existence, publishes an article on "Arsenic *vs.* Cholera." "By so taking ar-

senic," says the writer, "we fix the albumen to such an extent that cholera (which does the same) cannot take hold and thus cause, along with the loss of the salts, the cramps of the disease. By taking arsenic by mouth, hypodermatically, or from ivory points, and repeating as necessary to produce this effect, we destroy the animal and vegetable germs extant at the time of the exhibition of the remedy, and preserve the tissues from further and rapid carbonization in consequence thereof; and as it is a reconstructive as well as a tonic, we obtain immunity from the comma bacillus as long as forty days thereafter, making each person so arsenicized a non-infected and non-infectant medium daily growing stronger."

A critic in the British Medical Journal adds: "Voltaire somewhere says that magical incantations will kill a flock of sheep if a sufficiently large dose of arsenic be given at the same time; on the other hand, we have little doubt that arsenic will often protect from cholera—if assisted by a sufficiently lively faith." It is astonishing that editors of lay journals are so deficient in prudence and intelligence as to allow such rubbish a place in their columns.

The Origin of Circumcision.—

At a recent session of the Anthropological Society of Paris, M. Letourneau spoke of the custom of the Egyptians of practicing phallotomy on the vanquished, a custom which still obtains among Abyssinians. Every warrior who has killed an enemy, says Sir James Bruce, presents to the chief a bloody prepuce; at the conclusion of the ceremony each trophy is returned to its owner, then taken home and prepared in the same way as American Indians do their scalp trophies or "coups." This custom existed also among the Hebrews, for it will be recalled that the son of Jesse, in order to become the son-in-law of King Saul, was required to bring in the foreskins of a hundred Philistines. This ritual (circumcision) had its origin and became extended as an act of homage to the Deity. The usage of offering portions of the body to the gods has been, and yet is, very widespread. It is a symbol of complete sacrifice that has become partial by the lessening rigor of morals. It is thus that blood, or fingers, or the hair, was offered a sacrifice by the early Christians.—*La Nature.*

Bromide of Gold and Arsenic.—

About six months ago a Pittsburgh physician, through the medium of a Brooklyn medical journal, announced his discovery of a solution of bromide of gold and arsenic. The publication aroused no special interest and was apparently forgotten. Recently at the meeting of the Mississippi Valley Medical Association another Pittsburgh physician read a paper on the same subject, narrating details of a few successful clinical cases, exhibited some handsome "show bottle" samples of the gold solution, and puffed the preparation in most approved manner. Immediately after the meeting, proof-sheets of this paper were mailed to all medical journals, and inside of four weeks the article was the best and most cheaply advertised patent medicine in the country. It requires a master hand for such work, and having found such a sponsor we will hear more of the drug.—*Pharmaceutical Products.*

Another Analysis of "Cerebrine (Hammond)."—

Dr. Henry Leffmann, Professor of Chemistry and Toxicology in the Woman's Medical College, Philadelphia, Chemist to the State Board of Health of Pennsylvania, Eastern District, a man whose character and scientific reputation are beyond all question, recently examined a sample of "Cerebrine" obtained from the Columbia Chemical Co., of New York, by a well known drug house, and delivered at his laboratory in the original package, bearing across the label of the three-cornered bottle the *fac-simile* of Dr. Hammond's signature. The quantity of material in a single sample is quite small, but Dr. Leffmann was able to get reactions for boric acid, glycerin, nitrates, and nitrites. He has, therefore, reached the same conclusions as Professor Delafontaine of Chicago, Doctor Stockwell of Detroit, and others.

Pre-Natal Baptism according to Gregory.—

La Province Médicale quotes from a letter said to have been written by Diderot to Mlle. Volland in 1760, recounting that a certain English physician named Gregory, being convinced that in the next world it would go

hard with any child that had died without having undergone sprinkling of its head with cold water, accompanied by a certain verbal formula, always baptized the child *in utero* in cases of difficult labor. Having first pronounced the formula, "Child, I baptize thee," he filled his mouth with water, then applied it suitably (*appliquait convenablement*), and squirted the water as far as he could. As he wiped his lips with a napkin he was wont to remark: "It takes but the hundred-thousandth part of a drop to make an angel." We are not told the Gregorian method of dealing with a difficult case of breech presentation.—*Columbus Medical Journal.*

An Epileptic Canary.—

M. Féré tells the Société de Biologie that epilepsy is not unfrequently met with among birds. "Hitherto, however, only two such examples have been recorded in detail. I recently had under observation a canary thus affected. The attack commenced suddenly with a kind of aura, the bird extending its wings. The movement was followed immediately by a turning of the head to one side, and then the animal fell. Generalized tonic spasms were then succeeded by clonic spasms, these stages being followed by a period of stupidity, often accompanied by impulsive acts."

The editor of this journal has observed the same phenomena in three different species of grouse, also in wild turkeys, cockatoos, and parrots.

A Victim to Vegetarianism.—

The following obituary in the Schles. Zeitung may serve as a warning against a purely vegetable diet:

"'In Mentone my much beloved brother-in-law, the head teacher, Dr. Paul Kruger, has departed. He died at the age of 38, prematurely weakened as a victim to his immovable conviction of the correctness of pure vegetarianism.—*F. Conrad.*' In addition to this it may be said that vegetarians are more inclined to apoplexy than persons who are accustomed to a mixed diet, for the reason that the lime which is plentifully present in vegetables is deposited in the walls of the blood-vessels, rendering them fragile and easily ruptured. Cerebral hæmorrhages thus occur."—*Zeit. für Schulgesundh.*

Reindeer Meat as Food.—

The Rev. Mr. Wallis, who has lived for several years on the Porcupine River, in the British northerly possessions, says: "I have subsisted almost exclusively on reindeer (caribou) meat. It is very good, and about the only kind of meat you don't get tired of. I think it is better, all things considered, than beef, and you can eat it longer without its palling. It is a venison more than anything else. The Indians eat it almost exclusively, and are very big and strong. I keep an Indian hunter, and he supplies me with all the reindeer meat I want; also brings me grouse, ducks, bear, and other game as I need."

Growth of Children.—

The year of the greatest growth in boys is the seventeenth; in girls the fourteenth. While girls reach full height in their fifteenth year, they acquire full weight at the age of twenty. Boys are stronger than girls from birth to the eleventh year; then girls become superior physically to the seventeenth year, when the tables are again turned and remain so. From November to April, children grow very little and gain no weight; from April to July they gain in height but lose in weight; from July to November they greatly increase in weight but not in height. —*Exchange.*

Recovery from Leprosy.—

Doctor Jonathan Hutchinson records in the Medical Press a case of recovery from leprosy. He declares it is certain that neither contagion or hereditary transmission takes any important part in the spread of this malady; moreover, Anglo-Saxons who have acquired it abroad may return home and live among their friends without risk of communicating leprosy; but those who, without any possibility of inheritance, go to reside in leprous districts, may become lepers, and that too without any known exposure to contagion.

A Pot-and-Kettle Case.—

We note in a contemporary, printed at Washington, D. C., quite a groan over the

unethical stand of a certain Cincinnati physician who announced a chemical treatment for consumption. This same journal carries in its advertising pages, without any apology or seeming disquietude, the announcement of a certain "Chemical Co." selling "Cerebrine" for diseases of the brain, "Medulline" for diseases of the cord, "Cardine," etc., etc. Oh consistency, thou art often purchased for a small consideration indeed. — *Southern Clinic.*

The Lost Tail.—

Prof. Drummond thinks the coccyx a true rudimentary tail. That a distinct external tail should not be still found in man may be disappointing to the evolutionists, but he considers the want of a tail augurs more for evolution than its presence would have done.

Human beings with tails, though of somewhat rudimentary character, have been seen nevertheless. Twenty years since a negro boy with such an appendage was one of the "sights" of Cacheo, Senegambia.

His First Case.—

A young doctor attending his first case of labor was very much frightened when the membranes ruptured and the waters gushed out, and while looking in utter astonishment at the placenta, the husband said:

"Doctor, do you think she will die?"

"Die? Of course she'll die. Don't you see her bladder's busted and her liver dropped out?"—*Hot Springs Medical Journal.*

The Diaphanous Test of Death a Failure.—

Sir Benjamin Ward Richardson, in the Asclepiad, gives complete proof of the insufficiency of the test of death obtained by semi-translucency of the margins of the fingers when brought together before a strong light. While that appearance will be present in life, it may also be present in some cases of undoubted death.

The Pasteur Hydrophobia Cure.—

The Pasteur "hydrophobia cure" is a failure. We do not chronicle this with pleasure, but we will hope for better things. From time to time we have given our readers the drift of current opinion on the Pasteur cure for hydrophobia and its results, and they could lead to but one conclusion.—*Medical Times.*

The Toad in Therapeutics.—

Dr. Lauder Brunton, in his recent address to the Pharmaceutical Society, mentioned that phrynin has an action resembling digitalis, and he also remarked: "It is quite possible that some of these days we may have an enterprising firm advertising essence of toad as being of superlative virtue for the cure of dropsy."—*Medical Record.*

Heart Failure.—

"It is further provided, that certificate of death, giving 'heart failure' as the only cause of death, shall not be deemed sufficient upon which to issue a burial or removal permit, and such certificate must be returned to the physician who made it for the proper correction and definition."—*Laws of Connecticut.*

Comfort for Koch.—

Koch has one crumb of comfort since his divorce and marriage to the ballet dancer. Keeley has indorsed him as "the only original discoverer of causes of disease." One good turn deserves another. Keeleyism owes much to Koch's unprofessional conduct in regard to tuberculin.—*The Medical Standard.*

Recovery of Damages for Miscarriage.—

The Superior Court of New York City has ruled that when a married woman is so injured through the negligence of another person as to miscarry, her husband can recover damages for the loss of the child. In the case on trial the damage was assessed by the jury at $2,250.—*Medical Record.*

Molluscum Contagiosum.—

Doctor Jonathan Hutchinson believes that molluscum contagiosum in adults is most frequently obtained through the Turkish bath. Children commonly acquire the disease from their mothers while suckling, the breasts of the latter being the seat of the spots.

Discovery of Instruments of Precision.—

The stethoscope was discovered by Laennec in 1816. The clinical thermometer was

perfected in 1850. The ophthalmoscope in 1851 was introduced by Helmholz, the laryngoscope the same year by Avery, and the sphygmograph in 1863 by Marey.

Worth Remembering.—

"What is the subscription price of your journal?"

"One dollar a year."

"Is it intended for any particular class of doctors?"

"Yes; for those who have one dollar."

Tribute to Doctor A. Jacobi.—

American scholarship has received flattering recognition from the Old World by the invitation recently extended to Doctor A. Jacobi to take the chair of Pedagogy in the University of Berlin, which has been so ably filled in the past by Doctor Hanroch.

Women Physicians in Turkey.—

The Sublime Porte has decided to allow the free exercise of the medical profession to duly qualified women who present proper diplomas, and pass a satisfactory examination at the Imperial School of Medicine.

Refused Recognition.—

The Medical Department of Cotner University, located four miles from Lincoln, Neb., has been refused recognition by the Nebraska State Board of Health because of insufficiency of instruction.

A Curious Accident.—

The Hospital Gazette tells of an eyelash which happened to be carried into the eye, took root in the iris, and grew in coils in the anterior chamber until it had to be removed.

Trichinosis in Belgium.—

In one month of the present year, thirty-nine persons in Belgium contracted trichinosis, thirteen cases proving fatal.

The International Medical Congress.—

Postponed on account of cholera prevailing in Italy, it will be held at Rome March 29th to April 5th, 1894.

Hic Jacet, etc.—

Christ's Hospital, London, is closed, it is feared permanently.

Book Reviews.

THE CLINICAL USE OF PRISMS, AND THE DECENTERING OF LENSES. By Ernest E. Maddox, M.D. Second Edition, revised and enlarged. Cloth; 16mo. Pp. 170. Price, 4*s.* 6*d.* John Wright & Co., Stonebridge, Bristol, England.

The title of this little work indicates its chief features, though it does not entirely cover the ground. It communicates a series of aids to precision in the use of prisms as worked out by the author, which are of great practical utility in ophthalmic practice. The work especially deals with those anomalies of convergence, faulty tendencies of ocular muscles, and the needs of the neurasthenic class of patients, more particularly those neurasthenics in whom spectacles cause discomfort however perfectly the refraction may be corrected unless the lenses are also suitably placed in respective convergence.

The new edition deals more particularly with convergence (as well as some other ophthalmic problems) than did the first. The number of diagrams too has been considerably increased. The volume as a whole is most complete, and all the subjects are treated of in a simple and terse manner. The following gives a full outline of the subjects:

Geometrical properties of prisms; simplest optical properties of prisms; prismetry; testing of the apex of prisms; prismatic aberration; rotating prisms; images by internal reflection; clinical properties of prisms; adjustment of prisms in the trial frame; decentering of lenses; the study of convergence; effect on the fixation lines of displaced or decentered lenses; clinical application of prisms in diagnosis; the use of prisms in treatment; analysis of spectacles; localizing the eyes.

CALIFORNIA ILLUSTRATED MAGAZINE. Price, 25 cents; $3.00 a year. Published at 916 Market Street, San Francisco, Cal.

The Christmas Californian blossoms out with over 100 illustrations and 150 pages of reading matter, in a rich holiday dress suggestive of the semi-tropical breezes of the Pacific Coast. In its literary and pictorial matter this issue makes the Californian the most sumptuous publication ever issued west of New York.

The articles are of a wide range of interest. Philip Grayson mixes the snow of the Sierras and the petals of the orange blossoms in a marvelous way, taking the tourist through California, showing the wondrous climatic opposites of the State; Barrett Eastman contributes a poem; Mrs. Barbour writes entertainingly of "The Golden Jubilee of the Pope;" Professor Richardson has a valuable illustrated paper on "Early Art in America;" "A Submarine Christmas," by Theodore Caldwell, takes the rider six miles beneath the sea on a Christmas day, outdoing Verne in its intense interest; Gertrude Atherton writes delightfully on "Fort Ross;" Elodie Hogan gives "Picturesque San Francisco" a charming review; Charles Edwin Markham contributes a strong bit of verse; "A Case of Authorship" is a bit of humor that will be especially appreciated by the *literati;* Bertha Herrick affords a pleasant article on "The Forest Trees of California," richly illustrated; George H. Fitch reviews the "Literature of the Year" in a masterly way; Joaquin Miller throws down the gauntlet to the "Anti-Chinese" and denounces the sand-lot politicians; a most interesting article is the "Discovery of the Lost Mission of Santa Isabel" on the Lower Colorado; "A Trip to the Fâyum," by Octavius Brook, takes the readers into the Nile country; J. J. Peatfield writes of "The Wonders of the Mid-Winter Fair."

In poetry and fiction the Californian is one of the best publications of the day.

DEMOREST'S FAMILY MAGAZINE. Price, 20 cents; $2.00 per year. W. Jennings Demorest, New York.

A magnificent water-color picture, eminently suitable for mounting and framing, "Did Santa Claus Bring You?" is the frontispiece of the December, 1893, number. The other contents are: "A Christmas Carol," illustrated, by Charles L. Hildreth; "Christmas Eve at Bethlehem," illustrated, by E. A. Fletcher; "A Shock from the Wire," illustrated, by Arthur Field; "Children of the Stage," illustrated, by Elfried de B. Gudé; "The Road to Fame or Fortune, or How to Become Successful Professional Women," illustrated, by Margaret Bisland; "Our Baby Prize," illustrated; "The Man Underneath," illustrated, by Leslie Kane; "An Excursion to the Land of Dolls," illustrated, by "Aunt Ella;" "My Neighbor's Garden," a poem, by W. W. Fries; "True Gifts," a poem, by Laura Harvey; "Nemesis," Chapters I, II, and III, illustrated, by Anna Jaffray; "Christmas Decorations," by Eben E. Rexford; "The Prodigal," by Marion E. Monckton; "Society Fads," by Madame La Mode; "A Christmas Carol," with music, by H. G. Nicholls; "Christmas Lists," by L. C. Tulloch; "The Care of Growing Children," by Susanna W. Dodds, M.D.; "The Katy Woman's Christmas," by Mary E. Child. Besides these are the departments of "Home Art and Home Comfort;" "Household;" "Artistic Notes;" "The World's Progress;" "What Women are Doing;" "Mirror of Fashions." Editorially, W. Jennings Demorest writes of "Our Country in Danger," and "Our Country's Crisis." There is also an editorial on "Missionary Enterprise for the Salvation of Our Country." There is the usual "Correspondence Club," "Gleanings," "Spice Box," etc.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. L. Playfair, M.D., F.R.C.P. Sixth Edition. Cloth; 8vo; pp. 697. Price, $4.00; sheep, $5.00. Lea Brothers & Co., Philadelphia.

The demand in seventeen years for eight English and six American editions of this standard work, testifies to the success with which the author has executed his original purpose. He has succeeded in placing in the hands of the medical profession an able epitome of midwifery which embodies fully all available knowledge. He particularly dwells upon the practical part of obstetrical science, hence has made a work that is unexcelled as a guide in a most anxious and responsible branch of the profession.

The present issue is the result of thorough revision of its predecessor at the hands of the author, and likewise has received the benefit of careful editing by Doctor Robert P. Harris, of Philadelphia, whose annotations cover all points wherein American practice differs from the English. The work will continue to be, as it long has been, the favorite text-book and guide of the obstetrician and general practitioner.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The Lippincott Co., Philadelphia.

The complete novel in the December number is "Sergeant Crœsus," by Captain Charles King, and one of the most interesting of this author's tales of army life. The tenth and last of Notable Stories, "When Hester Came," is longest and best of the series, and by an entirely new and promising writer, Mrs. Bride Neill Taylor. Another sketch of marked power is "In the Camp of Philistia," by Virginia Woodward Cloud. The journalistic series is continued in a newspaper sensation by Louis N. Megargee, who tells of "A Clever Capture," which discusses grave-robbing. J. N. Ingram gives the history of "The Australian Rabbit Plague;" Walter Tournier tells "How to Cultivate the Body;" Edgar Fawcett writes of "Literary Popularity;" and M. Crawfton concludes his series on "Men of the Day" with a sketch of Thos. Huxley and Luigi Ardite.

WIZARD'S MANUAL OF MIND-READING, VENTRILOQUISM, ETC. Compiled by W. E. Skinner. Paper; 16mo; pp. 122. Price, 25 cents. W. S. Trigg, New York.

This is a very interesting compilation, explaining the methods of Hermann, Kellar, Irving Bishop, and others. The compiler claims that any person who has reasonable control over his nerves can acquire the faculty of mind-reading by a small amount of careful practice; also that the art of ventriloquism is more easily acquired than is generally believed, and may be attained by almost any male person possessed of fair vocal ability.

A somewhat queer announcement appears on the title page, wherein the name of Valentine Vox appears in connection with Hermann, Kellar, and Bishop, the compiler evidently not being aware that Valentine Vox is not an individual, but only the title of a book by Henry Cockton.

TEXT-BOOK OF PHYSIOLOGY. By Michael Foster, M.A., M.D., LL.D., F.R.S. Cloth; 8vo; pp. 1083. Price, $4.50. Lea Brothers & Co., Philadelphia.

This is the standard work on physiology, being most thorough and complete in all branches and detail; moreover, it embodies considerable material which has never before been presented to the medical public. Evidence of the success of the publication is had in the fact it is now in its fifth English and American edition. In its high character, in the care which is presented in the statements made along with verification of the same, and in its thorough dealing with physiological and histological problems, it is far ahead of any book of the class yet issued. Words of praise are inadequate. A comprehensive review would require a volume of itself.

SCIATIC NEURITIS, ITS PATHOLOGY AND TREATMENT. By Robert Simpson, L.R.C.P., L.R.C.S. Boards; 16mo; pp. 46. Price, one shilling. John Wright & Co., Stonebridge, Bristol, England.

In this volume the author sets forth the use of massage in the treatment of sciatic neuritis, which in his hands has apparently proved most satisfactory. He admits the general adoption of massage as a therapeutic agent is still a matter of the future, but holds "a widening practical experience of its utility will occasion its more general application; personal experience in this direction, extending over a considerable period, has caused me to recognize its value."

The work is well worthy of attention, and should at least stimulate impartial investigation of the claims made.

AID IN THE TREATMENT OF CHRONIC FORMS OF DISEASE. By George H. Taylor, M.D. Paper; square 16mo; pp. 109. George W. Rodgers, New York.

The title of this publication is sufficient evidence of the character of the treatise, which deals with certain specific forms of massage.

"SWEET CHARITY."—In the Artists' Exhibition of 1893 at the New York Academy of Design, there was exhibited an oil painting by J. L. G. Ferris, entitled "Sweet Charity." Its richness of coloring commanded instant attention, while the lesson it taught was so impressive that one naturally returned to it for a second view.

Its subject is a young lady of Colonial times who is on an errand to one of the poorer families of the town. She has a sensible, charming face, which expresses with remarkable fidelity the sentiment of her errand. There is not a home that this charming picture will not ornament. It must be seen to be appreciated.

"Sweet Charity" was purchased by the publishers of The Youth's Companion, and has been reproduced in colors in large size, 14½x21.

It will be sent to all new subscribers to The Companion who send $1.75 for a year's subscription, and the paper will also be sent free from the time the subscription is received, to January, 1894, and for a full year from that date, to January, 1895. This offer includes the Double Souvenir Numbers published at Thanksgiving, Christmas, and New Year's. Address The Youth's Companion, Boston, Mass.

Therapeutic Brevities.

Chloroform in the Treatment of Sunstroke.—Körfer (Deutsche Medicinische Wochenschrift) gives an account of the striking effect of chloroform narcosis in two exceedingly severe cases of sunstroke. The violent convulsions quickly ceased after narcosis (which was kept up an hour and a half) was induced, the pupil reflex which was absent returned, and the excessive reflex irritability of the skin subsided. The author, who is aware of the former theories which have been advanced in explanation of death from heart failure in sunstroke, suggests that the cardiac paralysis is the result of over-exertion of the heart. He believes that the greatly over-heated blood excites the cardiac ganglia and consequently the cardiac muscle, which in the end is heated to death. The same cause is believed to be in operation in connection with the cerebral centres, producing convulsions, acceleration of respiration, etc., and chloroform acts by overcoming this excess of excitation. The risk of chloroform narcosis in the subjects of sunstroke is estimated as no greater than in healthy persons.

Therapeutics of Saw Palmetto.—Doctor I. J. M. Goss declares he finds this drug very valuable in cases of indigestion and chronic coughs, including also phthisis pulmonalis—in this latter disease "it acts as a medicine and a food; it seems to counteract irritation of the lungs and sustain the vital powers promptly. It is very positive in its tonic effects upon the digestive apparatus; has a direct affinity for the mucous membrane of the entire digestive and respiratory organs, improving their tone, relieving irritation, and correcting abnormal conditions; and will doubtless prove a good remedy in chronic laryngitis, asthma, ozæna, and chronic pharyngitis. In sexual debility it has no superior; in diseases of the prostate gland it reduces hypertrophy; in inflammation of the mucous lining of the urethra and bladder it acts like sandalwood, copaiba, cubebs, kava kava, etc., and possesses the especial advantage that it does not induce either nausea or oppression of the stomach, but on the contrary improves digestion and assimilation.

Therapeutics of Asthma.—Doctor J. C. Smith has the utmost faith in Creasote in the bronchitis connected with tuberculosis; has had equally excellent results in asthma. He has also employed Quebracho extensively and satisfactorily in the same disease, but its taste is objectionable; it relaxes the muscular fibres, and is a true respiratory stimulant like strychnia. In dry bronchitis where the paroxysms come on without disturbance of digestion he has had some success with Euphorbia, and also a number of failures.

In the intervals of attacks of asthma, best results were obtained by the use of Acid Hydriodic (2 per cent.), better even than from iodide of potassium; the acid, moreover, proved most beneficial in cases associated with dry bronchitis or where the secretion was exceedingly tenacious.

Eucalyptus and Thymol Antiseptic.—This is a preparation containing borate of soda, benzoic acid, boric acid, thymol, oil of eucalyptus, oil of wintergreen, oil of thyme, oil of peppermint, and fluid extract of wild indigo. It may be used externally or internally. It is a non-coagulator of egg albumen. It may be freely used as a mouth-wash, root-dressing, general detergent, for cleaning the hands, and wherever a good antiseptic is desired. It may be used freely about the mouth, as it is non-poisonous, non-irritating, and non-injurious to tooth substance. Dentists find it especially valuable; and Doctor Edwin Le Fevre (Cincinnati Lancet-Clinic) employs it in the preparation of the arm for the reception of the vaccine virus.—*British Journal of Dentistry.*

Hiccough.—The local treatment is to compress the phrenic nerve and the pneumogastric of the neck by means of the index finger. At the same time may be given a half-teaspoonful of the following in a wineglass of sweetened water:

℞ Bismuth subnitrate, 45 grains.
Zinc oxide,
Zinc valerianate,
Calumba, powdered, } ää 1 drachm.
Opium, powdered, 1½ grains.
Anise essence, q.s.

—*Gazette Hebdomadaire.*

Therapeutic Value of Thyroid.—Great therapeutic power has been demonstrated for preparations of the thyroid gland in the treatment of a certain group of disorders associated with diseases of the thyroid gland, viz.: myxœdema, cretinism, and cachexia strumi priva; and more recently it has been said to be of use in the treatment of scaly diseases of the skin. It has proved of service in a few cases for the temporary relief of symptoms of exophthalmic-goitre and other forms of vaso-motor ataxia, in diabetes mellitus, and in acromegaly.—*S. Solis-Cohen.*

Pichi.—Doctor M. Friedländer uses this remedy in teaspoonful doses of the fluid extract, thrice daily, either clear or with a little sugar. "The taste is not disagreeable, nor does it give rise to digestive or renal disturbances, or eruptions, as does balsam of copaiba or oil of sandalwood." He has employed it for cystitis, prostatitis, neuroses, acute gonorrhœa, and epididymitis, and has found it to be especially useful in conditions of marked purulent discharge, as gonorrhœa and cystitis.—*Therapeutische Monatshefte—Journal of the Medical Sciences.*

Caffeine in Alcohol Inebriety.—Doctor Czarkowski (Vratch) observed that neuropathics suffering from pneumonia, when treated with Caffeine developed intense cerebral excitement with delirium and hallucinations immediately upon the first injection of the drug; that this continued as long as it was used, and further persisted for twenty-four hours after discontinuance. One patient developed suicidal tendency; and he suggests as a necessary precaution a close observation of this drug when administered to nervous or alcoholic patients.

Duboisine in Mental Disorders.—Professor Mongeri, of Milan, believes Duboisine to be preferable to all other sedatives on account of its prompt action and ease of administration. It should be used by preference in the evening, in order to combine the effects of natural inclination to sleep with the sedative effects of the drug. It may be employed in all forms of active insanity, especially furious mania and acute alcoholism; it is useless, however, in the asthenic and those forms accompanied with depression.

Therapeutic Value of Black Sampson.—In the July number of the Veterinary Journal (London) it is stated that fluid extract *Echinacea angustifolia*, made from the root of the plant, is successfully employed in diphtheria, cholera infantum, and ulcerations of the mucous membrane generally; also for rhus poisoning and for healing abscesses or other pus cavities. Furthermore it is a most valuable accessory agent in the treatment of syphilis. It may be advantageously applied externally to aid internal administration.

Solanum Carolinense in Epilepsy.—Doctor A. G. Selman, in the Medical Brief, writes very flatteringly regarding the use of this drug in epilepsy. He believes the remedy should be pushed to its full constitutional effect, viz., vertigo and stupor; he declares it is non-poisonous, and he gives ounce doses after each meal. One patient, on the tenth day, under the influence of the drug "went to sleep and slept for a week."

Remedy for Dyspnœa.—Doctor Beverly Robinson has found Rosin Weed of value in the dyspnœa of phthisis. He compounds as follows;

℞ Fluid extract of rosin weed, 1 ounce.
Alcohol, 4 ounces.
Water, 2 ounces.

Mix and filter. Dose: One-half to one teaspoonful.

—*Medical Standard.*

For Myalgia.—

℞ Liniment. chloroformi, } ää f ʒ iv.
Liniment. aconiti, }
Tinct. opii., f ʒ iij.
Liniment. saponis, ad f ʒ iv.

M. Ft. liniment. S.: To be well rubbed into the painful parts.

—*The Practitioner.*

Therapeutics of Gelsemium and Belladonna.—When the patient has a flushed face, bright eyes, and a tendency to be continually moving as if his nervous system was in a high state of irritation, make use of Gelsemium. On the other hand, should he be dull, face pallid, and inclined to be drowsy, remember Belladonna.—*American Medical Journal.*

Poke Root.—*Phytolacca decandra* has special affinity for glandular tissue. Many times mastitis may be prevented or aborted by the timely application of equal parts of Fluid Extract Phytolacca and glycerin. Again, in tonsillitis use both internally and as a spray or gargle. The rapidity with which relief is obtained is almost magical.

Sthenic Fever of Children.—Doctor Hobart A. Hare declares that Aconite (Normal Liquid.—Ed.) is the best of the circulatory and nervous depressants for the reduction of the irritating type of sthenic fever in children.

Commenting upon this the Georgia Eclectic Journal remarks: "But give it in minute doses often repeated."

Night-blooming Cereus.—*Cactus grandiflorus* has been found useful in functional heart disorders, relieving palpitation and nervousness. It seems to act chiefly on the accelerators and sympathetic ganglia, shortening diastole and stimulating the special vaso-motor system.—Watson, in *Medical Record.*

Normal Liquid Gelsemium.—"Gelsemium," says the Medical Summary, "in irritable bladder will often be of more value than any other remedy. It is especially adapted to those women of hysteric type, troubled by irritability at the neck of the viscus calling for constant urination."

Creasote Eructations.—To prevent the unpleasant eructations which sometimes follow the use of Creasote, it is said that dilute hydrochloric acid, in four-drop doses taken immediately after each potion of the creasote is ingested, in an almost specific.

Santonin in Dysmenorrhœa.—Doctor Bergey, in the Therapist, expresses a preference for Santonin over all other drugs as an emmenagogue and to relieve painful menstruation. He administers in ten-grain doses, at night, on the first appearance of the flow.

Corn-Silk.—Doctor H. M. Waldron considers *Ustilago maidis* a specific for the burning sensation after urinating peculiar to old men. He employs a teaspoonful of a solution of 10 drops to four ounces of water every two hours.—*Canada Lancet.*

Value of "Cerebrine" and "Cardine."—There is no testimony of which I am aware, other than that of Doctor Hammond, in favor of the therapeutic virtues of that observer's "Cerebrine" and "Cardine."—S. Solis-Cohen, in *Philadelphia Polyclinic.*

Pruritis Ani.—Balfour reports that he has almost never failed to obtain prompt relief in cases of pruritis of the anus and vulva from an ointment containing 80 grains of calomel to the ounce of vaselin or other unguent.—*Exchange.*

Management of Cystitis.—Doctor Dana (Chicago Medical Times) declares *Thuja occidentalis*, administered five drops every three hours, will relieve the severest case of uncomplicated cystitis in a very short time.

Incontinence of Urine.—When due to slight disorder of the genito-urinary or nervous system, this may be relieved by *Rhus aromatica*, beginning with five to ten drops four times daily.—*Canada Lancet.*

Cimicifuga in Mental Depression.—Doctor G. W. Durga (Medical Bulletin) says Black Cohosh is very valuable in symptoms of mental depression occurring in subjects with uterine disorder.

Medical Progress.

Ulcers of the Leg, and Varicose Veins.—Doctor W. W. Bremner, of Toronto, remarks: Ulcers of the leg are very frequently difficult to cure, though many methods have been advocated. A very simple and successful method which, after an extensive trial, has proved very satisfactory, consists in the application of a perfectly flexible and absorbent dressing in such a way as to restore the venous circulation and remove all œdema from the leg, at the same time absorbing all the discharges and permitting of free and painless exercise. The materials are: circular cotton bandages (knitted), three inches wide, in six-yard rolls; absorbent lint; and suitable ointments and lotions—there is no special ointment suitable to every case, but each case must be considered separately; whatever form of ulcer, or wherever situated on the leg, the bandage must be applied in the same way.

To apply the bandage and dressing, cut a piece of absorbent lint the size of the ulcer, and apply to it the ointment suitable; place this on the ulcer, and cover with several thicknesses of lint larger than the ulcer—(the patient should be seated in a chair and place his foot on a stand of the same height). The bandage must be applied so as to evenly compress the whole leg from the toes to the knee, making the pressure rather greater at the lower portion of the leg. No reverses should be employed, and it requires many more turns on the ascending portion of the leg, where only the top edge of the bandage holds, than are required on and above the calf—this is important, as too much pressure above congests the lower portion of the leg. It makes a much nicer finish to put on the last roll from above downwards, thus keeping in the loose lower edges. Four rolls (twenty-four yards) are required at least, for each case—two rolls on the leg and two for washing; in heavy patients it is better to use more bandage. The idea is to have the pressure so regulated that the venous circulation is restored to its natural condition, while the arterial is unaffected. The change thus produced in an ulcerated and œdematous leg is like that produced by proper drainage in an unwholesome swamp. The dressing should be changed on an average every second day. In the great majority of cases this was found sufficient.

When the ulcer is cured, it is better to continue the bandage for several months; patients can be taught to apply it themselves.

Free exercise is most beneficial, and patients can continue their work as usual; in fact, the very first application usually relieves most of the pain. In varicose veins the bandage should be applied in the same way, and on the whole is much superior to elastic stockings.

In recent wounds of the leg this method of bandaging shows to greatest advantage. In acute synovitis of the knee, or indeed of any joint, it is most valuable, giving an even, constant pressure unobtainable by any other means. It is most useful after adhesions in a stiff joint have been forcibly broken up.—*Dominion Medical Monthly.*

BOARDS OF HEALTH.—In Indiana the law provides that the Board of Health for counties shall be made up of the County Commissioners and one physician, who shall be selected by said commissioners, and it shall be the duty of such physician to keep the records of the board under the title of "Secretary of the Board of Health." The health officers for the cities and incorporated towns shall consist of the Common Council, including the Mayor, and one physician, who shall act as secretary. Compensation for the services of such physician lies with the board selecting him. The duties of such physician make it necessary that he be one who has especially fitted himself for such work, by reason of years of experience as a practicing physician in all the various phases of epidemics and endemics. He should be a man known for his scientific attainments, not only in his profession, but in the collateral branches of scientific research. He should be thoroughly and well equipped as a chemist, and all that is known in the domain of bacteriology should be as a primer to him. He should be able to make a chemical and microscopical analysis of water reservoirs, and understand the nature and effect of polluted water-heads upon the health of towns and cities using such streams, avoidably or unavoidably. The effect of polluted streams flowing through cities should be understood, and the harm liable to result be reduced to a minimum. Milk supplies should be carefully looked after, especially in the summer months, and the question of the purity of this food examined, not for buncombe and cheap newspaper notoriety, but with a view of stopping the barter and sale of deleterious food products, and protecting the interests of the public health, without reference to the private fortunes of the health officer. He should be a man of character, with a broad comprehension of the rights of all the people, and with decision enough to do what is clearly for the best interests of all, irrespective of any merely personal advantage or disadvantage. He should be selected because he is able, conscientious, strong and vigorous; not because of his race, political color, or previous or prospective condition of party servitude. He should have the regulation of funerals in which the corpse is dead from infectious or contagious disease. This should be true not only in the "piping times of peace," but in the furore and fear of epidemics. While the present barbarous mode of disposal of the dead exists, nothing can be done but to protect the bigoted from their ignorance, and hope that the time may come when the Christian church will be sufficiently civilized to teach her votaries that cremation will in no wise interfere with their future state, and that cremation, especially for those dead of contagious diseases, will reduce the percentage of mortality more than all the medical skill in Christendom can do with drugs.

It is the infamous practice of political parties to use the minor offices of the State as "sops," and in this honored custom some feeble old political hack, or roustabout, or pusillanimous parasite hanging to some church organization is given the control of the vital fortunes of our vulnerable and tender children, and in his hands are placed the commercial interests of great manufacturing towns. Merchants well understand the great losses entailed by an unchecked epidemic, and railroads suffer in all the branches of their work. Yet the average councilman would lie awake nights to think of some "available" Democrat or Republican, when he could have a *physician* with all the qualifications by making a few judicious inquiries and paying a sufficient salary.—*Fort Wayne Medical Magazine.*

ABSORPTION OF IRON.—Doctor A. B. Macallum's observations on the distribution of iron in the animal and vegetable cell have resulted in determining that the chromatine of every species of cell is an iron-holding compound, and that this substance gives origin to the hæmoglobine in the animal body. It follows from this that the iron of inorganic preparations in the food, if it is assimilated at all, must go directly to the formation, not of hæmoglobine, but of chromatine—a concluslon which necessitates a revision of the commonly accepted views as to the physiological relations of the metal, and which at the same time suggests two interdependent questions: Is chromatine formed

in the animal body, or is it formed in vegetable organisms only? What is the true explanation of the beneficial effects of the administration of iron salts?

Various compounds of iron have been administered to animals (guinea-pigs, rabbits, etc.) in order to determine by micro-chemical and histological methods their action in the intestine. The results may be summarized as follows:

The chloride, phosphate, and sulphate, and certain organic preparations, are absorbed by the epithelial cells of the villi and by the siderophilous cells surrounding the lacteal vessels.

When given in large doses, certain preparations have, upon the absorbing elements, especially the siderophilous cells, an effect similar to chemotaxis.

The absorption occurs chiefly in the upper and middle portions of the small intestine.

The beneficial effects of the administration of iron in anæmia, in large part, may be explained on the view that its salts increase the absorptive activity of the intestinal mucosa. Other investigations on the absorption of chromatine tend to support this view, and to indicate that inorganic and albuminate compounds are not assimilated in the animal body, or, in other words, iron-holding nucleo-albumens are products of vegetable metabolism only.

ANENT ALCOHOL.—[Lawson Tait has caused a decided shock to the "Tee-tees" of Great Britain by the following declaration.—ED.]

I have been fully persuaded, after thirty years of life, as hard in work and as full of responsibility as well could be, that the moderate use of alcohol is a necessity in our modern life.

The argument against all and every use of alcohol, which we used to hear much of years ago, was based on the statement that it was not a product of Nature and not used in any natural condition. The argument itself is a very unsafe one, even if the premises were correct, but they are not, and the plague of wasps has proved it.

I have been watching wasps with great interest, and have noticed the avidity with which they attack certain fruit when fully ripe—rotting, in fact—and I have also noticed some of the peculiar results of their doing so. The sugar in some fruits which are most attacked by wasps has a tendency to pass into a kind or kinds of alcohol in the ordinary process of rotting—a fact which is easily ascertainable by the use of a still not large enough to attract the attention of the excise authorities. On such fruits, particularly grapes and certain plums, you will see wasps pushing and fighting in numbers much larger than can be accommodated, and you will see them get very drunk, crawl away in a semi-somnolent condition, and repose in the grass for some time, till they get over the "bout," and then they will go at it again. It is while they are thus affected that they do their worst in stinging, both in the virulent nature of the stroke and the utterly unprovoked assaults of which they are guilty.

I was stung last year by a drunken wasp, and suffered severely from symptoms of nerve poison for several days. In such drunken peculiarities they resemble their human contemporaries.

There are certain plants (orchids) whose cross-fertilization is secured by a regular system of public-houses in which bees are made drunk, for without inebriation the bees would not go through the antics by which alone the orchids can be fertilized.

MORBID ANATOMY OF PARALYSIS AGITANS.—Doctor C. L. Dana concludes there is a general vaso-motor paralysis affecting skin, viscera, nerves, and lower nerve centres, but not the brain. There was found in two cases examined post-mortem, great vascular dilatation, connective-tissue proliferation, and nerve-cell degeneration. The lesions were most marked in the central gray of the cord and in the vagus and glosso-pharyngeal nuclei; no changes were found in the brain. Doctor Dana believes the vascular and connective-tissue changes to be primary, the nerve-cell changes to be secondary; the process resembles a low grade of chronic inflammation. He considers the disease due to a toxine, and that its seat is in the spinal cord, and more particularly in the anterior gray matter supplied by the central arteries.

Ketscher, of Prague, reports finding atrophy in varying degrees everywhere on post-mortem examination; the nerve fibres in the cord were almost completely degenerated, this being especially marked in the posterior columns and in the peripheral nerves. There were some changes in the brain, the ganglionic cells being pigmented and somewhat degenerated. Marked vascular changes were found, the vessels being thickened and altered. Miliary aneurysms and small hæmorrhages appeared in the cord. An examination of the nervous systems of ten old persons who had never suffered from paralysis agitans revealed the same changes in a lesser degree. Prof. Ketscher agrees with

Borgherini and others, that paralysis agitans is nothing more than a premature senility of the nervous system, and he further agrees with Dana that the primary changes are in the vessels, those in the nervous structures being secondary.—*Pittsburgh Medical Review.*

Hay Fever.—Doctor Tyrrel, arguing in the Canadian Practitioner from his own case, believes hay fever is a manifestation of lithæmia resulting from imperfect oxydation and disintegration of nitrogenous matter in the liver, occasioning the production of insoluble lithic acid and lithates. . . . Vigorous exercise, he found, promoted disintegration and elimination of waste products, and would quite exempt him from ordinary attacks and relieve the attendant sense of prostration. This is a rational theory, since said exercise was in out-door air—one season he rowed a canoe on the river—where he naturally not only oxygenated his blood, but escaped irritating house gas and town dust. His personal analysis of hay fever practically places this disorder on a rheumatic basis for cause; and in confirmation he testifies that salicylate of soda given in free doses not only gave positive relief, but, when timely taken, defended against attacks.

A determining factor in those so prone to coryza, hay fever, and other forms of influenza, is the circumstance that in conjunction with the systemic condition disposing to these lesions, they have peculiarly sensitive nasal and tracheal tissues, which fret and inflame from contact with certain poisons in the air. The acridity of the poison usually inhaled is readily inferred from the ichorous blisters of "cold sores" raised around the nostrils and upon the lips after the toxic assault.

Cats and Diphtheria.—Doctor Edmund Gwynn, Medical Officer of Health for Hampstead, has forwarded us the following case, which may be of interest at the present time, when diphtheria in London is on the increase, as showing once more that the disease may sometimes be traced to domestic pets. In February last a cat in a tenement house situated in Fleet Road was noticed to be very ill and suffering from a bad swollen throat. On February 24th a child, aged five years, who had been nursing the cat, was sent into the Northwestern Hospital suffering from diphtheria. The cat was subsequently sent away for treatment, but returned to the premises on July 22d, enticed back by the children of the house, with whom it was a great favorite; it was still in a bad state of health and suffering from an unhealed abscess in the vicinity of the throat. On July 26th two other children were found to be affected with sore throat, and one was removed to the Hospital, suffering from diphtheria, on July 31st. The father of the children, believing the cat to be the cause of the infection, destroyed and buried it—much to the indignation of the landlady—so that no opportunity was afforded of examining the animal—*British Medical Journal.*

Black Tongue.—Masoin studied this affection with special reference to its parasitic relations. The disease, it is generally admitted, consists of a piliform epithelial hypertrophy; and he found colonies of micrococci arranged concentrically around the stem of the papillæ. The micrococci or spores reacted readily with the anilin dyes, and had no capsule. It was impossible to cultivate or inoculate them. Staining *in situ* seemed to have no influence upon their development, and appeared to negative the parasitic nature of the affection. In reality the epithelial production always begins in the centre and extends symmetrically towards the borders of the tongue on both sides.

The most energetic parasiticides (sublimate, salol, boric acid) had no effect upon the disease. The coloring matter which impregnates the cells is clearly distinct from that secreted by chromogenic microbes, and affects the characteristics of that of the horny tissues. The epithelial hypertrophy would therefore seem to originate from atrophic disturbance and to belong to the group of benign neoplasms, especially papilloma.—*L'Union Médicale.*

Tumors of the Bladder.—Mr. Wallace considers hæmorrhage the first and most important symptom in the diagnosis of tumors of the bladder. The characteristics of the hæmorrhage are:

Its sudden onset and sudden disappearance without any previous warning or cause:

Intermittence, sometimes of months, sometimes of weeks:

Appearance of the blood, namely, red blood-clots of irregular shape, the blood being passed at the end of micturition:

Total want of benefit from the ordinary hæmostatics.

As regards methods of diagnosis, the sound is rejected, except in so far as it determines the presence of stone. Cystoscopy and cystotomy are the only two reliable methods, and the latter is to be used only where cystoscopy

is impossible. An earnest plea is made for the more general use of the cystoscope, for by it can be obtained an exact knowledge of the site, attachment, and size of the tumor. —*Edinburgh Medical Journal.*

DEATH FROM THE USE OF PENTAL.—Lick reports two fatal cases of poisoning by pental.

A young girl, whose necrosed finger it was necessary to amputate, inhaled 10 grammes of pental from a sponge inhaler. During the anæsthesia dyspnœa, cyanosis, and cardiac failure suddenly developed. Artificial respiration and tracheotomy were of no avail, so that death soon followed.

The second case was a girl, aged 18, anæsthetized by pental for the injection of iodoform into the hip. She had been previously anæsthetized by chloroform and bromide of ethyl. On removing the inhaler ten minutes after the inhalation had began, dyspnœa, spasm of the masseters, stertorous breathing, and cyanosis developed. Injections of ether, artificial respiration, injections of salt water, and tracheotomy were futile; the patient perished.

In these cases the accident could not be attributed to asphyxia, but directly to the toxic properties of the pental.—*Pharmaceutical Products.*

RELATIONS BETWEEN CHOREA AND EPILEPSY.—Doctor G.R.Trowbridge (Alienist and Neurologist) says there is an intimate relation between epilepsy and chorea, both diseases being due to disturbances of the motor and intellectual centres of the brain, which differ only in the degree of intensity. Chorea predisposes towards epilepsy, and epilepsy toward chorea—the former being the most frequent condition. Chorea in one generation may be transmitted as epilepsy in the next or succeeding generations; or the epilepsy may appear first, and the chorea in the following generations. A neurotic taint in the parent or parents may make one child choreic and another epileptic. The diseases may exist simultaneously, but in these cases they are in inverse ratio, *i.e.*, the more violent the chorea, the less frequent and severe the epileptic convulsions, and *vice versa*, the more violent the epilepsy, the less marked are the choreic movements. In cases of chorea and epilepsy there is more or less mental impairment.—*Medical Times.*

LUNG RESECTION FOR TUBERCULOSIS.—Tuffier, two years ago, resected the apex of the right lung for tuberculosis. A free incision having been made in the second intercostal space, the protruded portion of lung, after careful examination, was ligated and then cut away. The fragment thus removed contained tuberculous deposits in which bacilli could be recognized on microscopical examination. The wound healed by first intention; and on the ninth day there was perfect respiration in the right lung from base to summit, without any trace of pneumothorax. Since this operation the patient, an adult male, has resumed work, and has suffered neither from cough nor from hæmoptysis; he can run without feeling of dyspnœa; general condition has much improved, and weight increased sixteen pounds since the operation. The respiration is as full on the right as on the left side, and there is no apparent difference between the two lungs.—*British Medical Journal.*

HABITAT OF THE FEMALE ITCH-MITE.—The exact situation of the itch burrows is somewhat vaguely indicated by dermatologists. Most writers state that they are placed in the Malpighian layer of the epidermis, and Kaposi gives a figure bearing out the view that the female *Sarcoptes hominis* lives constantly in this situation. In 1889 Török showed that the burrow and the acarus itself are found in the horny layer. M. Dubreuilh exhibited preparations confirming this latter statement. Three burrows were, with the upper portion of the dermis, excised, and the fragments, fixed by alcohol and colored *en masse* with carmine, were mounted in paraffin, and sections made. It was seen that the "run" and the space occupied by the mite were both contained entirely in the horny layer, the parasite being separated from the Malpighian layer by several series of horny epidermic cells.—*Hospital Gazette.*

PUDIC NEURECTOMY AS A REMEDY FOR MASTURBATION.—Doctor Eastman, of New York, tells of a patient, aged 26, who had been a confirmed masturbator since her sixth year. Coition was without satisfaction and caused pain. She had run the gamut of internal medication, suturing of the labia majora, electro-cauterization of the parts, oöphorectomy, and clitoridectomy, without relief to her nervous symptoms or to her desire for masturbation. Finding one side of the vulva more sensitive than the other, Doctor Eastman thought a local paralysis would be desirable, and so cut down upon the pudic nerve on the left side, and, finding it hypertrophied, dissected and removed a portion

about three inches long. The wound healed promptly, the patient gained in weight, her symptoms disappeared, and a year and a half after the neurectomy she was still free from her vice.

FREAKS OF HEREDITY.—At a recent meeting of the Paris Hospital Medical Society, M. Marie showed the photograph of a woman with supplementary mammæ, and stated that nearly all the members of her family, for four generations back, had presented the same anomaly. Moreover, among her father's fifteen brothers and sisters there had been six twins, and among her own brothers and sisters, twelve in number, eight twins. All these fourteen twins were of the male sex, showing that the tendency to beget twins could be transmitted through the male line. Another example of this possibility was cited by M. Le Gendre—that of the Scotch poet, Burns, who was alleged to have become the father of twins four times, twice by his wife and twice by his mistress.—*India Medical Record.*

SCARLATINA IN ADULTS.—Dr. C. Gimmel, from observations made in the medical clinic of Zurich, deduces the following conclusions:

The tendency to scarlatina is somewhat less in adults than in children:

The longer an epidemic is absent, the greater is the spread of the disease among adults when it comes:

Scarlatina runs a milder course in adults than in children:

Nephritis is a much less frequent complication of scarlatina in adults than in children, and when it occurs is less harmful in its results:

Articular rheumatism is a more frequent complication of scarlet fever in adults than in children.

HYSTERICAL FEVER.—At a meeting of the Medical Society of the Hospitals, M. Hanot presented a case of hysterical fever. The patient was a woman, 21 years of age, who exhibited symptoms of typhoid fever. Her husband, brother, and one of her sisters had just suffered from this disease, and she had taken care of them. The sudden onset, the absence of prostration, the abundant urine of clear color, and the history of nervous attacks in her youth, pointed to the diagnosis of nervous fever. The examination of the urine in these cases might, if it showed the inverse formula of the phosphates signalized by Gilles de la Tourette and Cathelineau, facilitate the diagnosis of these hysterical pseudo-typhoid fevers.—*Le Progrès Médicale.*

TRAUMATIC ANEURYSM OF SPERMATIC ARTERY.—A man aged 50, while climbing a fence, was struck in the left groin by the end of a nail, following which there appeared a swelling the size of a goose's egg in the region of the left inguinal canal, and which continued to enlarge for fourteen months. It was tense and obscurely fluctuating; testicle below quite free, no pain or tenderness, but a dragging sensation. General health unimpaired. Some blood clots were turned out by an incision into the sac, when profuse hæmorrhage followed, that was found to proceed from a smooth rounded opening large enough to admit the end of a probe in the spermatic artery. The artery was ligated above and below the wound, when complete relief was had.

FEMININE HERMAPHRODITISM. — Fehling reports, in Archiv fur Gynäkologie, a woman twenty-one years old who had menstruated regularly for six years and suffered with an abdominal tumor which extended from the floor of the pelvis to the edge of false pelvis. The clitoris was a penis-like organ an inch and a quarter long, terminating in a well formed glans with a minute prepuce. Below were two folds which also connected with the urethra. A second orifice, very large, ended in a vagina an inch and a quarter long, at the bottom of which could be felt an infantile retroverted uterus. The left labia majora was well developed, while the right resembled a small scrotum development. Laparotomy revealed a tumor of the left ovary.

LABOR IN AN ALBUMINURIC PATIENT: EFFECTS OF CHLOROFORM.—Poitou-Duplessis notes a case where a patient excreted fifteen grains of albumen daily. She gave birth to twins, one child presenting by the vertex, the other by the breech. Chloroform was, nevertheless, administered for three consecutive hours during labor. After delivery the urine no longer contained albumen, excepting the faintest trace. This case, in Duplessis' opinion, proves the German theories regarding the effect of chloroform on the kidneys, even when albuminuria is present, are inexact. Charpentier remarked that the sudden disappearance of albumen in this case was a phenomenon often seen after labor.—*British Medical Journal.*

Shoes and Erect Carriage.—There is a singular difference between the carriage of Japanese children and the way in which our children walk and move about. The Jap urchin, whose feet never knew the unkind pressure of tight shoes, or, in fact, any pressure at all, walks more erect, is more sure-footed. In fair weather he wears flat shoe-sandals; in these sandals the big toe is widely separated from the others, which gives the child a surer foundation. In wet weather he must maintain his equilibrium on his stilt-like wooden clogs, which keep his feet dry, at the same time compelling him to acquire an extraordinary power over his own motions.—*Columbus Medical Journal.*

Relation of Aneurysm to Syphilis.—For many years Doctor D. Drummond has been deeply interested in the connection between syphilis and aneurysm. Since commencing the investigation no indisputable case has come under his notice in which specific disease was wanting, excepting two or three examples of acute softening of the arterial wall, with aneurysmal bulging, in malignant endocarditis. Arterial strain through hard work is of course a factor in the production of aneurysm, but it is one that in the vast majority of instances requires to be multiplied by specific arteritis and then it is the lesser quantity of the two.—*British Medical Journal.*

Test for Typhoid Urine.—Make a solution of Sodium nitrite 1 part, in distilled water 100 parts; make a second solution of c. p. Hydrochloric acid 11 fluidrachms, in distilled water 2½ fluidounces, then add Sulphanilic acid enough to saturate (about fifteen grains).

Pour a small quantity of the urine to be examined into a test-tube, and add a little of the sodium-nitrite solution. Then add a portion of the second solution along with a little ammonia. If the urine is from a case of true typhoid fever, the mixture will turn wine-red in color.—*Bulletin de Pharmacie de Lyon.*

The Germ Theory of Disease.—This theory, which has been sprung upon us as new and fashionable in medicine, is really only the old fashion revived—like crinoline and other matters. A century and a half ago there were men insisting with great vehemence upon the truth of all or most of the ideas which are current in our midst to-day. The germ theory was in fact the same as the one of the present day, only it did not take rapid hold of the minds of those who heard it, and, therefore, by-and-by it dropped out of fashion.—Doctor Edmund A. Cook, in *Journal of British Society.*

Passing Catheter in Prostatic Enlargement.—Pass a needle armed with a stout thread, by the eye of a gum elastic catheter to its apex, and push it through on the concave side; then pull the thread through to the knot at its end. Pass the catheter thus threaded until the obstruction is met, when by gently drawing on the thread the point of the instrument may be raised above the obstruction and made to easily enter the viscus. If the prostate be very large, pressing over the hypogastrium with the hand facilitates the passage.—*Lyon Médicale.*

Whooping Cough.—Doctor Nageli, in the Dublin Journal of Medical Sciences, asserts that a paroxysm of pertussis may be averted by drawing the lower jaw downward and forward; the course of the disease is favorably affected by suppressing the attacks. Spasmodic cough due to other causes may be similarly restrained.

Death from Hysteria.—It is extremely rare that a death takes place from hysteria, but Leo, of Bonn, reports a case of hystero-epilepsy in which death occurred from spasm of the glottis and consequent asphyxia. At the autopsy no organic disease of the nervous system was discovered.

Urethritis and the Bicycle.—M. Millée, in a report to the Société de Médecine et de Chirurgie Pratiques, mentioned numerous cases of urethritis as a result of too great devotion to the bicycle; he attributes the malady directly to unusual irritation of the perineum.

Poisoning by Eucalyptus Oil.—Doctor Neale, in the Australasian Medical Gazette, reports a case of fatal poisoning by oil of eucalyptus; also several cases wherein profound toxic effects were induced by the same drug, but which ultimately recovered.

Pruritus Ani.—Coffee, says Brown-Séquard, is a frequent cause of this malady.